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CONCEPTUAL AND METHODOLOGICAL PROBLEMS IN PSYCHOANALYSIS

BY

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Conference Chairman and Consulting Editor

LEOPOLD BELLAK

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INTRODUCTION: THE FRAME OF REFERENCE OF THE MONOGRAPH

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Each field of science probably passes through more or less well-defined phases of development. In psychoanalysis the great pioneering has been done by Freud and the early generations of students. Now, this one genius and his collaborators having laid the foundations, an era of methodological refinement should follow. It is necessary to redefine the hypotheses, test limits, validate, reformulate, and by such methods again to extend the clinical and theoretical horizon.

Freud himself was aware that concepts are nothing but approximations of the truth and that a gradual and continued development of hypotheses is necessary. In 1915, in the opening paragraphs of his paper *Instincts and Their Vicissitudes*,[1] he discusses the formulation of models of thought very lucidly: "It is only after more searching investigation of the field in question that we are able to formulate with increasing clarity the scientific concepts underlying it and progressively so modify these concepts that they become widely applicable and, at the same time, consistent logically. Then, indeed, it may be time to immure them in definition."

Now, more than forty years after these words were written, psychoanalysis has as yet spent little time considering its concepts in the orderly, systematic, and experimental way of science. Unfortunately, such an approach has not infrequently, been quite strongly, unnecessarily, and incorrectly considered antithetical to psychoanalysis and barred from its forum.

Of course, one could wait longer before attempting to put the house in order, but clinical and theoretical psychoanalysis seem to have advanced to a point where an orderly statement of hypotheses as well as some attempt to arrive at an increasingly better definition of our concepts (and, wherever possible, experimental exploration of constructs and of the process of psychoanalysis) are mandatory. Too many round-table discussions terminate in frustration because semantic confusion does not even enable the participants to agree precisely on what they are discussing. Furthermore, clinical psychoanalysis is still taught with little reference to general principles, and preceptorship still takes the place of systematic teaching.

One of the reasons for this difficulty is doubtless the fact that psychoanalysts are predominantly applied scientists, professionals, or therapists and, as such, sometimes ambivalent in their attitudes toward theory. Also, neither medical-school training nor postgraduate training in psychiatry or psychoanalysis provides any schooling in scientific method, concept formation, or other rigors of thought taught to graduate students of other sciences. On the other hand, clinicians generally, and psychoanalysts particularly, have good reason to be wary, at times, of the academic approach. Among theoreticians there are those ambitious ones who prefer to be so far removed from life that they choose to study problems with a telescope; there are also those so very

precise that they consider any exploration coarse if not restricted to the confines of an ultramicroscope.

I recommend the type of theoretical approach that uses a "magnifying glass": interested primarily in problems but one step removed from what one can see with the naked clinical eye; the approach, of course, being in keeping with and in steady interchange with daily experience.

The relationship between the clinician and the academic theoretician can best be illustrated by the story of the two people who decide to learn how to swim: the first jumps into deep water and, almost drowning, flails about desperately, trying to stay afloat. The other takes lessons on land from the best of teachers and perfects details of his technique for years, but never gets into the water at all.

Psychoanalysts are also justifiably wary of innovators. Too often an entire structure is discarded by people who have indeed a valuable brick or two to offer but mistake it for a whole housing project. I believe it only parsimonious never to discard a theory until it has been thoroughly tested and all its possibilities exhausted.

It seems to me that Freudian psychoanalytic theory, to date, still supplies the most internally consistent and most comprehensive theory of personality and has predicated upon it the most effective therapy. The hypotheses of psychoanalysis are poorly defined and poorly integrated, but they are probably largely verifiable, and they are useful in their ability to help understand, predict, and control behavior, therapeutically and otherwise.

In short, the application of the scientific method of inquiry to psychoanalysis is possible and necessary. It is evident that such a method is but a vantage point, not an ideology, and neither a cure-all nor an end in itself. A steady interchange of data from clinical, empirical work with theoretical, methodologically refined viewpoints is necessary in any science.

It is my hope that the papers arrayed for this monograph and for the conference upon which it is based will help examine critically some of the basic concepts of psychoanalysis and, wherever necessary, recast them in a form that will make them still more useful for practice and theory.

We all have reason to be grateful to The New York Academy of Sciences for being ready and willing to provide a forum for psychoanalysis. I consider it most important that the auspices of such a "supradenominational" scientific organization were free of the constraint that develops quite naturally within any given professional society or any special school of thought.

I profoundly regret that certain problems of transcription and the stringent limitations of both time and space made it impossible to include much valuable discussion contributed by many speakers at the conference on which this monograph is based. I thank all participants for the scholarly spirit of their cooperation.

Reference

1. Freud, S. 1915. Instincts and Their Vicissitudes. Collected Papers of Sigmund Freud. **4**: 60–83. Hogarth Press. London, England.

An Attempt at the Systematic Restatement of the Libido Theory

I. A CRITICAL ANALYSIS OF SOME ASPECTS OF THE LIBIDO THEORY: THE CONCEPTS OF LIBIDINAL ZONES, AIMS, AND MODES OF GRATIFICATION

By Thomas S. Szasz

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Introduction

The purpose of this publication is to re-examine the fundamental theoretical building blocks of the scientific structure of psychoanalysis. It was logical, indeed inevitable, to choose the libido theory as the starting point. Accordingly, the first section of this monograph is devoted to this subject. It was decided, moreover, to divide the libido theory into three parts, so that attention could be focused on one or another aspect of it. This division was based on the categories that Freud himself used in his presentation of this subject. My task is to begin this re-examination of the theory by addressing myself principally to the notions of libidinal zones, aims, and modes of gratification. Alfred H. Stanton discusses object choices, and Eugene Pumpian-Mindlin considers the energetic-economic aspects of the libido theory. I assume that there is general agreement among the contributors that such a division, while perhaps unavoidable for purposes of organization of the presentation and discussion of the material, is artificial, resulting in the disjointing of interlocking parts. While I shall not dwell on this difficulty, I mention it in advance, because I shall, at times, unavoidably trespass on the subject areas of my colleagues.

In attempting a thoroughgoing re-examination of the libido theory it seemed to me that I could do no better than to concentrate on Freud's *Three Essays on the Theory of Sexuality* (Freud, 1905). In this work, which he revised five times, Freud presented a complete exposition of his theory of the libido. My presentation, which will rest almost exclusively on the *Three Essays*, will in effect consist of a critical examination of that book. My plan is to begin with some of Freud's basic definitions, and then to inquire into the epistemological nature of his theory. I suggest that we ask such questions as these: What kind of a theory is Freud's libido theory? What are the observations upon which it rests and which it purports to "explain"? What are the logical and socio-historical antecedents or bases of its theoretical constructs? Why were they chosen? What are some of the models after which the libido-theoretical concepts were fashioned? In sum, I shall try to raise some relevant questions about the epistemology of libido theory. Following this introductory discussion I shall systematically consider and criticize Freud's ideas about libidinal zones, aims and modes of gratification. I shall conclude with some general remarks concerning libido theory, and shall consider particularly the problem of what kind of statements constitute "psychological explanations" of behavior. I shall not try to evaluate the over-all merits (that is, what it has enabled us to do) and the limitations (meaning the problems with which

it has prevented us from dealing) of the theory. This task, I assume, is one to which the concerted efforts of all contributors to this monograph are devoted.

The Fundamental Concepts and Some Questions About Them

Freud defined the concept of libido as follows:

"The fact of the existence of sexual needs in human beings and animals is expressed in biology by the assumption of a 'sexual instinct,' on the analogy of the instinct of nutrition, that is of hunger. Everyday language possesses no counterpart to the word 'hunger,' but science makes use of the word 'libido' for that purpose" (page 135).*

Later in his *Essay*, he gave a more comprehensive account of this concept:

"The conceptual scaffolding which we have set up to help us in dealing with the psychical manifestations of sexual life tallies well with these hypotheses as to the chemical basis of sexual excitation. We have defined the concept of libido as a quantitatively variable force which could serve as a measure of processes and transformations occurring in the field of sexual excitation. We distinguish this libido in respect to its special origin from the energy which must be supposed to underlie mental processes in general, and we thus also attribute a qualitative character to it. In thus distinguishing between libidinal and other forms of psychical energy we are giving expression to the presumption that the sexual processes occurring in the organism are distinguished from the nutritive processes by a *special chemistry*. The analysis of the perversions and psychoneuroses has shown us that this sexual excitation is derived not from the so-called sexual parts alone, but from all the bodily organs. We thus reach the idea of a quantity of libido, to the mental representation of which we give the name of 'ego-libido,' and whose production, increase or diminution, distribution and displacement should afford us possibilities for *explaining the psychosexual phenomena observed*" (italics mine, page 217).

Both definitions, if examined critically, lead directly to some vexing questions. If libido denotes the appetite or desire for sexual satisfaction, much as hunger does for the nutritive process, then there would be reason to assume numerous other analogous forces, denoting the operations of diverse need satisfactions, such as those concerning thirst, sleep, contact with human beings, and work. Indeed, some workers have spoken of "instincts" or "drives" subserving some of these needs and activities. However, this amounts merely to the creation of mysterious entities, which sometimes give an illusion of providing an "explanation."

The longer definition quoted (which constitutes the first paragraph of a section entitled "The Libido Theory," in the third part of the *Essays*) is, in present-day terms, a crudely psychosomatic formulation. Libido is here defined as a form of energy. This energy is different from the kind that underlies mental processes in general. This difference, moreover, derives from the special chemistry of the sexual processes. Libido is therefore conceived of as a concept belonging (principally) in the realm of physics and chemistry (or the so-called natural sciences). To its mental representation Freud gave the name

* Unless otherwise indicated, all quotations are from Freud's *Three Essays on the Theory of Sexuality* (Freud, 1905), and are cited by the gracious permission of the copyright owner, Imago Publishing Co., Ltd., London, England.

of "ego libido," which he then proceeded to compare and contrast with "object libido." The physicalistic character of these concepts has been commented on by several workers and need not detain us (Colby, 1955; Szasz, 1952). I only wish to add one point that I believe has escaped attention; namely, the analogy between ego and object libido in psychoanalysis and potential and kinetic energy in physics. The following excerpts illustrate this assertion:

"Narcissistic or ego-libido seems to be the great reservoir from which the object-cathexes are sent out and into which they are withdrawn once more; the narcissistic libidinal cathexis of the ego is the original state of things, realized in earliest childhood, and is merely covered by the later extrusions of libido, but in essentials persists behind them. It should be the task of a libido theory of neurotic and psychotic disorders to express all the observed phenomena and inferred processes in terms of the economics of the libido" (page 218).

This quotation carries us one step further. It is a concise statement of what Freud considered to be the task of a libido theory; namely, "to express" the phenomena of observation in the language of this theory. No modern epistemology, however, can accept describability as a sufficient criterion of the function of a scientific theory (Withers, 1956).

Let us pause here and ask once more some simple but important questions. What was it that Freud set out to explain? By means of what sort of constructs did he seek his explanation? Finally, why were these constructs chosen rather than some others? How was their value, or limitation, to be assessed? I do not propose to give definitive answers to these questions. First, I shall present Freud's own answers to some of them. These provide us with important material, for they will help contrast the contemporary expectation concerning libido theory with the task for which he constructed it.

Freud wrote: "I must, however, emphasize that the present work is characterized not only by being completely based upon psychoanalytic research, but also by being deliberately *independent of the findings of biology.* I have carefully avoided introducing any preconceptions, whether derived from general sexual biology or from that of particular animal species, into this study—a study which is concerned with the sexual functions of human beings and which is made possible through the *technique of psycho-analysis.* Indeed, *my aim has rather been to discover how far psychological investigation can throw light upon the biology of the sexual life of man*" (italics mine, page 131).

It is impossible to agree with Freud that he avoided introducing any preconceptions into his work. Freud was perhaps unaware both of the philosophical and the biological roots of his thought. Nor can we completely agree that his work was based on "psychoanalysis"—at least, as we have come to understand this word (Szasz, 1958c). Freud himself stated that much of his work was based on the published account of perversions, as these have been recorded by contemporary medical observers. Finally, he stated as his goal the elucidation of the biology of the sexual life of man. This notion is ambiguous, for it is not clear what he meant by "biology." It seems that Freud was concerned with demonstrating the dependence of human sexual behavior on anatomical and physiological (particularly endocrine) factors, and he strove

to accomplish this by means of psychological studies. Whether or not he achieved this particular goal is not of consequence to us now. It is important for us today, however, to realize that this is a question in which we are no longer interested! The dependence of sexual behavior on the body and its chemistry is a truism that we now take for granted in much the same way as we assume the dependence of thought, emotion, and behavior on the structure and function of the brain. Indeed, I submit that the assumption of the existence of this type of relationship between biology and behavior was not a novel view in Freud's day, either. What *was* novel was the psychology of human behavior, particularly sexual behavior, which was a forbidden subject; indeed, this is the subject that interests us today. We thus put the libido theory to work for us in this quest of increasing and clarifying our understanding of some aspects of human relationships. However, if Freud had a quite different purpose and task in mind in devising these constructs, how much help can we reasonably expect from them when we apply them to our own problems?

Libidinal or Erotogenic Zones

Freud's original description of his concept of "erotogenic zone" was as follows: "There is a further provisional assumption that we cannot escape in the theory of the instincts. It is to the effect that excitations of two kinds arise from the somatic organs, based upon differences of a chemical nature. One of these kinds of excitation we describe as being specifically sexual, and we speak of the organ concerned as the 'erotogenic zone' of the sexual component instinct arising from it" (page 168).

In a footnote added in 1915 Freud commented: "It is not easy in the present place to justify these assumptions, derived as they are from the study of a particular class of neurotic illness. But on the other hand, if I omitted all mention of them, it would be impossible to say anything of substance about the instincts" (pages 168 and 169).

These are obscure statements. They are not based on psychological observations or concepts, but rather on chemical ones. Freud's assertion, moreover, that these assumptions are derived from the study of a particular class of neurotic illness is clearly contradicted by his own definition. He then proceeded to describe the function of the erotogenic zones as follows:

"The part played by the erotogenic zones is immediately obvious in the case of those perversions which assign a sexual significance to the oral and anal orifices. These behave in every respect like a portion of the sexual apparatus. In hysteria these parts of the body and the neighboring tracts of mucous membrane become the seat of new sensations and of changes in innervation—indeed, of processes that can be compared to erection—in just the same way as do the actual genitalia under the excitations of the normal sexual processes" (page 169).

I believe that according to our present mode of thinking it is objectionable, or at least cumbersome, to speak of isolated organs in such a personified fashion. Instead of saying that oral and anal orifices "behave" like the sexual apparatus, it would seem more accurate to say that the person (patient) uses his mouth

or anus for purposes of sexual activity. The difference between Freud's statement and mine is not merely a matter of semantics. In other words, it is not a matter of using different forms of expression to say the same thing. The logical content of what is asserted in these two ways is itself different. Freud said that there are changes in certain body parts. For instance, in hysteria the mucous membrane "becomes the seat of new sensations"; and he spoke of (somewhat mysterious) "changes in innervation." Such statements plunge us into an epistemological muddle, the clarification of which has been of some interest to me in recent years (Szasz, 1956a, 1957a).

What Freud did was to commit us unwittingly to the conceptual framework and use of a Fechnerian model of psychophysics. He thus spoke of "sensations" being located in body parts. I have presented in detail elsewhere, (Szasz, 1957a), and I shall discuss further here, the fact that it is doubtful if we are justified in speaking of "sensations" as being located in space. Accordingly, my statement that the patient uses certain body parts in an other-than-customary manner avoids the fallacious assignment of sensations to certain organs and, instead, asserts an alteration in the patient's ego orientation to his body. In brief, I suggest that in the *Three Essays* and elsewhere, particularly in *Studies on Hysteria* (Breuer and Freud), Freud has called our attention to some extremely important and ubiquitous clinical phenomena. I have, therefore, no quarrel with his observations. However, he has framed these observations in an idiom and compounded them with a theory that deserve careful re-examination and vigorous scientific criticism. Accordingly, I submit that what Freud observed and described, omitting his particular theoretical preconceptions and perhaps substituting some of my own for them, was that many individuals do not use certain parts of their bodies in accordance with the rules that society (meaning thereby both our moral conventions and medical ideas) has prescribed for their use. In these terms, one would say that the mouth is for eating (and perhaps kissing), the anus for defecating, the eye for seeing, and so forth. These are the rules governing the proper use of these body parts (Szasz, 1956b). What, then, does it mean when Freud asserts that, ". . . in scopophilia and exhibitionism the eye corresponds to an erotogenic zone" (page 169)?

I suggest that this simply means that the eye is being used to obtain "sexual pleasure," and that this represents an exercise of this organ that is forbidden by the rules governing its behavior. I emphasize that throughout this work, as well as elsewhere, Freud, so to speak, had taken for granted, and had tacitly agreed with, the contemporary medical view concerning the proper use of the human body as an object for the purpose of "living" (Szasz, 1958a). This covert model and frame of reference, supplying among other things the proper rules for the function of various body parts, crops up constantly in *The Three Essays*. I shall cite only one example to illustrate this point. Speaking of the development of the child, Freud wrote: "After all, he is *meant* to grow up into a strong and capable person with *vigorous sexual needs* and to accomplish during his life all the things that human beings are urged to do by their instincts" (italics mine, page 223).

This is not a logical argument, but the affirmation of an ethical position. As such, it is one that had its relevance in Freud's day principally because it stood in opposition to the ethics of Protestant Puritanism and Roman Catholic anti-sexualism. It is really as if Freud had given vent to his struggles against the Catholic mores that surrounded him, and that, in fact, constituted the legally codified religion of the country (led by the Hapsburg monarchy of Austria-Hungary) in which he was born, grew up, and lived. Catholicism asserted that sexuality was bad and should be curbed. Freud countered this by asserting that sexuality was good and that the development of "vigorous sexual needs" should be encouraged, and (quite mistakenly, I believe) he rested his argument on medicoscientific grounds, claiming that since man is physically endowed with sexual organs he is "meant" to develop their function in a vigorous manner. I do not want to be misunderstood as advocating sexual inhibitions. What I am calling attention to, however, is precisely this dichotomy in regard to sex and the fact that tendencies in either direction are fraught with various complications. Also, I wish to stress that (at least as I see it) the existence of a certain kind of bodily machinery cannot by itself form the basis of an ethical position. Thus, man's sexual endowment is, on strictly logical grounds, no more a reason for advocating the vigorous development of this function than is the existence of muscles a basis for advocating pugnacity. The problems with which we deal in human relations in complex societies are much too intricate to allow making such point-to-point correlations between body functions and social behavior. Of course, Freud was well aware of this, and stressed this consideration, for example, in *Civilization and Its Discontents* (Freud, 1929).

In this discussion I have not considered one well-known aspect of the theory of libidinal zones; namely, the hypothesis according to which successive libidinal zones constitute a kind of timetable for the embryology of childhood behavior.* I omitted this subject deliberately and for two reasons: first, because I consider it to be, in its broad outlines, a valid hypothesis; second, because I consider it to fall increasingly outside of the scope of psychoanalysis. By the latter statement I mean simply that contemporary psychoanalysis, like other sciences, has become characterized by its distinctive methods of operation rather than, for example, its subject matter or concepts. Thus the pattern of early childhood development, as dictated principally by somatic maturational processes, falls within the domain of the research pediatrician, the ethologist, or the anthropologist as much, and more, as it does within that of the psychoanalyst. The direct observation of childhood behavior is not facilitated by

* This aspect of the libido theory was cogently summarized by Bellak as follows: "The second major aspect of the libido theory was (aside from Freud) shaped by [Karl] Abraham. A well-trained embryologist before he became a psychiatrist and psychoanalyst, Abraham applied some concepts of segmental development to his new field and conceived of an orderly sequence of stages of libidinal development, from the oral zone (active and passive) to the anal zone (retentive and aggressive-ejective) to the genital. To a certain extent, thus, the libido theory is concerned with maturational processes. To this is added the effect of upbringing and relative emphasis or frustration of the various zones and aims, the timing of the stimulation (earlier or later in life), the subsequent effects upon the personality in terms of fixation, regression, symptom formation and object relationships, and the reversibility of any adverse effects" (page 11).

the application to it of the psychoanalytic method, although it may be aided by psychoanalytic concepts and hypotheses. The latter are, or should be, as readily available to other behavioral scientists as they are to psychoanalysts. I realize that the opinion I have just expressed is not shared by some of my psychoanalytic colleagues. Such differences of opinion stem, I believe, from an insufficient distinction between psychoanalysis as method and as theory (Szasz, 1958c).

To summarize: I have suggested that Freud's notion of "erotogenic zones" postulates an ambiguous psychosomatic theory to account for a type of human behavior that could perhaps be described more satisfactorily in purely psychological terms. I have particular objections to conceiving of sensations in general, and of pleasure in particular, as residing in, or emanating from, specific body parts. Affect is an atopical concept similar to patriotism or love, and it is a mistake to search for a physical location to which it can be assigned (Ryle, 1949).

Libidinal Aims

Again, I begin with Freud's definition of this concept.

Freud wrote: "I shall at this point introduce two technical terms. Let us call the person from whom sexual attraction proceeds the sexual object and the act towards which the instinct tends the sexual aim. Scientifically sifted observation, then, shows that numerous deviations occur in respect of both of these—the sexual object and the sexual aim. The relation between these *deviations* and what is assumed to be *normal* requires thorough investigation" (italics mine, page 136).

Further, he wrote: "The normal sexual aim is regarded as being the union of the genitals in the act known as copulation, which leads to a release of the sexual tension and a temporary extinction of the sexual instinct—a satisfaction analogous to the sating of hunger" (page 149).

It seems to me that what Freud did here was to set down the rules that, he believed, govern, or should govern, sexual behavior. Thus, speaking of a "normal" sexual aim implies certain correspondingly "abnormal" aims. This usage makes it seem as if he were talking about a medical problem; as if, for example, he were saying that the number of white blood cells per cubic millimeter was such and such and then proceeding to set forth the various abnormalities of white blood cell formation. However, sexual behavior, as Freud knew only too well, has much more to do with social learning and convention than do most medical matters. Consequently, I believe that Freud was closer to describing what I (Szasz, 1956b) suggested was analogous to rules governing games rather than to the description of sexual "normality" and "abnormality"; unless, of course, we choose to reinterpret the latter concepts in the sense of the former model. To illustrate, Freud wrote: "Perversions are sexual activities which either (a) extend, in an antomical sense, beyond the regions of the body that are designated for sexual union, or (b) linger over the immediate relations to the sexual object which should normally be traversed rapidly on the path towards the final sexual aim" (page 150).

This, I submit, is simply a description of what Freud considered to be the proper (on medical grounds, of course) form of sexual behavior; he thus recodified what was essentially the social standard of his culture. Logically, this description has a closer affinity to a set of rules setting forth how to dance the Viennese waltz or how to play chess than it does to those describing the pathological anatomy and physiology of a disease syndrome of the body, such as pulmonary tuberculosis, for example. To say that male and female genitals are so constructed as to fit together in sexual union is to make a medicoscientific statement; however, to say that this is the manner in which they should be used, and that other uses are "pathological," is to render a moral-normative judgment, couched and disguised in the idiom of medicine (Szasz, 1957c).

One of the weakest links in the logical chain that constitutes the libido theory is Freud's assumption and postulation of "pleasure" as the principal feature of the libidinal aim. Moreover, he conceptualized this notion in an obscure but strongly "organic" manner.

For instance, in connection with the aim of infantile sexuality, he wrote: "The example of thumb-sucking shows us still more about what constitutes an erotogenic zone. It is a part of the skin or mucous membrane in which *stimuli* of a certain sort *evoke* a *feeling of pleasure* possessing a particular quality. There can be no doubt that the stimuli which *produce* the pleasure are governed by special conditions, though we do not know what those are" (italics mine, page 183). He continued: "Psychology is still so much in the dark in questions of pleasure and unpleasure that the most cautious assumption is the one most to be recommended. We may later come upon reasons which seem to support the idea that the pleasurable feeling does in fact possess a specific quality" (page 183).

I shall comment further on the problem that the concept "pleasure" presents to us in psychology in the next section of this paper in connection with considerations of modes of libidinal gratifications. Let me note here only that Freud spoke of "stimuli which *produce* pleasure" (italics mine). Accordingly Freud postulated a state of affairs such that in thumb-sucking, for example, the skin of the thumb becomes endowed with pleasure-imparting qualities. This odd and misleading view, of course, did not originate with Freud; he derived it from his contemporary medical world view. It still exercises a profound influence on medical and psychiatric thought, an expression of which, for example, is the widespread belief that alcohol possesses great pleasure-imparting qualities, particularly for the alcoholic.

The inadequacies of regarding libido as primarily pleasure-seeking have been most cogently pointed out by Fairbairn with the suggestion that we consider libido rather as object-seeking. I am in essential agreement with this view.*

* I should say here that my agreement with Fairbairn's criticism of Freud's libido theory is more with the "spirit" than with the "letter" of his writings. Since this is not the place to discuss the area of my respective agreement and disagreement with Fairbairn's psychoanalytic views, it should suffice to note that my reservations are based on two main considerations: first, I believe that Fairbairn, too, has used physical model explanations (such as comparisons of the flow of libido with that of electricity (page 31) to an excess and in places where such explanations may not be needed; second, I think that he, perhaps just as much as Freud, has been overly influenced by a medicotherapeutic orientation, to the detriment of scientific clarity (for example, he speaks of "natural emotional relationships," page 40).

Fairbairn retained the concept "libido," but used it to denote, in a nonspecific (nonsexual) manner, all psychic energy or force. In other respects his suggestions for revising the libido theory are contained in the following paragraphs:*

"The historical importance of the libido theory and the extent to which it has contributed to the advance of psychoanalytical knowledge requires no elaboration; and the merit of the theory has been proved by its heuristic value alone. Nevertheless, it would appear as if the point had now been reached at which, in the interests of progress, the classic libido theory would have to be transformed into a theory of development based essentially upon object-relationships. The great limitation of the present libido theory as an explanatory system resides in the fact that it confers the status of libidinal attitudes upon various manifestations which turn out to be merely techniques for regulating the object-relationships of the ego. The libido theory is based, of course, upon the conception of erotogenic zones. It must be recognized, however, that in the first instance erotogenic zones are simply channels through which libido flows, and that a zone only becomes erotogenic when libido flows through it. The ultimate goal of libido is the object; and in its search for the object libido is determined by similar laws to those which determine the flow of electrical energy, *i.e.*, it seeks the path of least resistance. The erotogenic zone should, therefore, be regarded simply as a path of least resistance; and its actual erotogenicity may be likened to the magnetic field established by the flow of an electrical current. The position is then as follows. In infancy, owing to the constitution of the human organism, the path of least resistance to the object happens to lie almost exclusively through the mouth; and the mouth accordingly becomes the dominant libidinal organ. In the mature individual on the other hand (and again owing to the constitution of the human organism) the genital organs provide a path of least resistance to the object—but, in this case, only in parallel with a number of other paths. The real point about the mature individual is not that the libidinal attitude is essentially genital, but that the genital attitude is essentially libidinal. There is thus an inherent difference between the infantile and the mature libidinal attitude arising out of the fact that, whereas in the case of the infant the libidinal attitude must be of necessity predominantly oral, in the case of the emotionally mature adult libido seeks the object through a number of channels, among which the genital channel plays an essential, but by no means exclusive, part. Whilst, therefore, it is correct to describe the libidinal attitude of the infant as characteristically oral, it is not correct to describe the libidinal attitude of the adult as characteristically genital" (pages 31 and 32).

A general interpretation of certain so-called "abnormal" sexual activities follows from this view and was summarized by Fairbairn in these lines:

"Fundamentally these substitutive satisfactions (*e.g.*, masturbation and anal erotism) all represent relationships with internalized objects, to which the individual is compelled to turn in default of a satisfactory relationship with objects in the outer world. Where relationships with outer objects are unsatisfactory, we also encounter such phenomena as exhibitionism, homosexuality,

* The quotations from Fairbairn are cited with the gracious permission of the copyright owner, Routledge & Kegan Paul Ltd., London, England.

sadism and masochism; and these phenomena should be regarded as in no small measure attempts to salvage natural emotional relationships which have broken down" (page 40).

Finally, to summarize Fairbairn's suggestions, in a synopsis of his own views he stated:

"The main features of my reformulation were to the following effect:

"(1) Libido is essentially object-seeking.

"(2) Erotogenic zones are not themselves primary determinants of libidinal aims, but channels mediating the primary object-seeking aims of the ego.

"(3) Any theory of ego development that is to be satisfactory must be conceived in terms of relationships with objects, and in particular relationships with objects which have been internalized during early life under the pressure of deprivation and frustration.

"(4) What are described by Abraham as 'phases' are, with the exception of his 'oral phases,' really techniques employed by the ego for regulating relationships with objects, and particular with internalized objects.

"(5) The psychopathological conditions ascribed by Abraham to fixations at specific phases are, with the exception of schizophrenia and depression, really conditions associated with the employment of specific techniques" (pages 162 and 163).

The principal difference between the views of Freud and Fairbairn is that the former focused attention chiefly on physiological, the latter on psychological, factors. Freud's physiological or, as it is sometimes said, biological orientation to human relations is generally, I think quite uncritically, hailed as a "good thing." No doubt it had some advantages. Perhaps it was inevitable, in view of Freud's own background and development, that this was the way in which he approached and formulated his observation (Jones). The time has come, however, to re-examine critically the nature as well as the actual and potential limitations of Freud's so-called physiological orientation. The need for this apparently is not generally felt. For example Brenner (1955) in his recent *Elementary Textbook of Psychoanalysis* wrote as follows:*

"The psychological theories which Freud developed were always physiologically oriented as far as it was possible for them to be so. Indeed, as we know from some of his correspondence which has been recently published, he made a most ambitious attempt to formulate a neurological psychology in the early 1890's. He was forced to abandon the attempt because the facts did not permit a satisfactory correlation between the two disciplines, but *Freud certainly shared the belief which is currently held by most psychiatrists and perhaps by most non-medical psychologists as well, that some day mental phenomena will be describable in terms of brain functioning.* As yet it does not seem possible to accomplish this satisfactorily, though some interesting attempts are being made in this direction. When such attempts will be successful, no one can say, and in the meantime the formal or theoretical links between psychoanalysis and other branches of biology are few. The two chief ones concern the psychic

* The quotations from Brenner are cited with the gracious permission of the copyright owner, International Universities Press, New York, N. Y.

functions which are related to sense perception, and the instinctual forces called 'drives,' which form the subject matter of this chapter" (italics mine, pages 25 and 26).

It would seem in psychology, and particularly in psychoanalysis, that to be "physiologically oriented" is a morally tinged exhortative expression, akin to standing for "democracy and justice" in public life. However, what do we actually mean, in operational terms, when we advocate such an orientation? How does this affect our view about the relationship between brain and mind? Does it not usually mean that a value judgment has been rendered, according to which brain physiology is somehow a "more fundamental" science than psychology or psychoanalysis, and that those who adhere to this view expect to use the latter only as a temporary, stopgap measure, awaiting the fuller development of our physiological knowledge? When that happy day arrives we shall be able to dispense with psychology. I do not share this view, and I suggest that we scrutinize our own psychoanalytic formulations for traces of this prejudice in favor of one branch of science (biology and the physical sciences) and against another (psychology and the social sciences).

Modes of Libidinal Gratification

It is difficult for me to discuss this subject for, as a present-day psychoanalyst, I consider that our task in regard to this problem is to address ourselves to the various modes of experiencing pleasure. Accordingly, we must conceive of pleasure as an affect, in much the same way as we conceive of anxiety, guilt, shame and so forth, as affects. However, nowhere in Freud's writings, and certainly not in the *Three Essays*, did he discuss pleasure as an affect. Freud took "pleasure" as a self-explanatory concept that he then used to explain certain phenomena. He assumed that pleasure was somehow somatically determined (an assumption that he also held concerning pain) and let the matter rest there. I discussed this subject in detail in my book, *Pain and Pleasure* (Szasz, 1957a), but much of what was said there need not concern us here. Let me call attention to only two considerations that are now related to our critical re-examination of Freud's libido theory. The first of these is that Freud considered pleasure to be a "sensation" that could be located, like a substance, in one or another part of the body. This view, as I see it, rests on a fundamental epistemological error that, as such, is not open to correction by empirical research alone. Second, Freud considered pleasure as a goal toward which the libido (and, presumably, the person) was striving. This is a broad assumption or hypothesis around which we may choose to order our observations and explanations. Of itself, it is not an observation that can be readily verified or disproved. The value of this fundamental orienting hypothesis and of its derivatives (for example, the death instinct) has been vastly overrated. In other words, while it is obviously attractive to state that man tends to seek out activities that are pleasurable rather than painful, this is a truism (and a tautology), for we habitually designate activities as "pleasurable" or otherwise dependent upon our disposition toward pursuing or avoiding them.

This is hardly, the place to dwell further on a primarily philosophical scrutiny

of the problem of pleasure. I shall therefore limit myself to quoting a passage from the *Three Essays* and to commenting on it. Freud wrote:

"The characteristics of infantile sexual life which we have hitherto emphasized are the facts that it is essentially autoerotic (*i.e.*, that it finds its object in the infant's own body) and that its individual component *instincts* are upon the whole disconnected and independent of one another in their *search for pleasure*. The final outcome of sexual development lies in what is known as the *normal* sexual life of the adult, in which the *pursuit of pleasure* comes under the sway of the *reproductive function* and in which the component instincts, under the primacy of a single erotogenic zone, form a firm organization directed towards a sexual aim attached to some extraneous sexual object" (italics mine, page 197).

Freud here spoke of "instincts . . . in search of pleasure," and also of pleasure coming "under the sway of the reproductive function." To begin with the latter statement, we may note the rather spurious equation of the genital function with the reproductive function. Is this not a religious (Roman Catholic) view of the proper rules for (marital) sexual relations, rather than any observation deserving the name "scientific"? Also, Freud used the word "is," where he apparently meant "should be." There is a curious absence throughout this book of any consideration of genital activity that is, or that is intended to be, nonreproductive; there is no mention of birth control and its implications for the subject at hand.

As to Freud's first contention, namely, that relating to pleasure as a motive or cause of behavior, it is a highly complex problem. As Gilbert Ryle (1956) observed:

"The notion of pleasure has in our own day ceased to be the topic of heated controversies—though not, in my opinion, for the reason that philosophers, preachers, psychologists, economists, and educators have at last got its logical rule agreed. They have, I guess, dropped the subject, because the nineteenth-century thinkers ran it to death. It was employed as their shared maid-of-all-work, who always bungled the tasks for which doctrinaires pronounced her to have the proper qualification" (page 66).

Further examination of the problem posed by the notion of libidinal modes of gratifications would require inquiry into the physicalistic background and models of the libido theory, and of psychoanalytic theory in general. It seems appropriate here, however, to do no more than to suggest that such a problem, so to speak, exists and may be worthy of study (Szasz, 1958d).

Conclusions

In this presentation I have sought to call attention to a number of considerations in connection with the libido theory that I believe merit re-examination and revision. Prominent among these is Freud's preoccupation with a medico-therapeutic frame of reference. The full implications of this theoretical framework are far-reaching. Elsewhere I have recently described its effect on our ideas concerning psychoanalytic treatment (Szasz, 1957c). In relation to libido theory, the main consequence of this theoretical preconception is the superimposition of a medico-therapeutic world view, as a moral scheme, on

the existing ethical belief systems of Western Christian cultures. Thus, certain forms of sexual behavior were judged by Freud as "bad," not because one's religion forbade it, but because such behavior was considered to be "immature" (although widespread) on medical grounds. I should like to anticipate objection to this criticism of mine, which might run along the following lines: it could be said that, after all, Freud emphasized the biological sources and ubiquity of various deviant forms of sexual behavior and thus sought to make "perversions" more acceptable, rather than less so. This is true. However, it is my impression that what he did in relation to "perversions" could be likened to describing how syphilis or tuberculosis are widespread, so much so that, in a given culture, perhaps everyone might harbor the infection. This does not give us a view of the matter that even approaches scientific neutrality. Heterosexual genital union, with procreation implicitly a part of it, is still presented as a moral desideratum, now based on a compelling analogy with physical health, whereas other forms of sexuality, such as masturbation and inversion, are now judged to be undesirable on the grounds of medical and psychoanalytic arguments. The following excerpts are cited to support this contention:

"The very remarkable relation which thus holds between sexual variations and the descending scale from health to insanity gives us plenty of material for thought. I am inclined to believe that it may be explained by the fact that the *impulses of sexual life* are among those which, even normally, *are the least controlled by the higher activities of the mind.* In my experience anyone who is in any way, whether socially or ethically, abnormal mentally is invariably abnormal also in his sexual life. But many people are abnormal in their sexual life who in every other respect approximate to the average, and have along with the rest, passed through the process of human cultural development, in which sexuality remains the weak spot" (italics mine, page 149).

These statements, I submit, have no meaning other than the expression of the author's personal moral code. Freud's very definition of a perversion, since it is a phenomenological one, is nothing short of a disguised introduction into psychoanalysis of the official Roman Catholic view of "normal" and "abnormal" sexual behavior. The relevance of this entire system of conceptualization has broken down, however, by virtue of the very discoveries that Freud made and has enabled us to make. Consequently, we know that overtly "normal" sexual behavior may well function as a defense or protection against the wishes and fears associated with other patterns of sexual activity. Conversely, socially deviant forms of sexual activity may have complex somatic, historical, and communicative aspects.

It may be noted further that in writing about the "explanation" of perversions, Freud did not differentiate between three fundamentally different categories of events and concepts, all of which are still being intermingled in discussions concerning the "explanation" of behavior. First, in seeking an "explanation," he had in mind what we call "etiology" or the causation of illness. Thus, just as the tubercle bacillus causes tuberculosis, so ". . . a number of mental impulses are combined in it (*i.e.*, sado-masochism) to produce a single resultant" (page 159). Second, Freud used the concept of "explana-

tion" to refer to a process essentially akin to that of translation (Szasz, 1958b). Thus, just as the German word "*Buch*" means "book" in English, so a dream or an hysterical symptom, which we shall call "X," may be said to *mean* "Y." In this case "Y" is considered to be the "cause" of "X." Finally, Freud used the concept "explanation" in the sense of building an instrumental theory of the events in question; by this I mean that he used his therapeutic intervention as a method of verification. Schematically, this amounted approximately to the following: if an unconsciously operating historical antecedent, whether an event or a fantasy stimulated by certain events, is the "cause" of a certain (undesirable) behavioral pattern, then making it conscious and robbing it of its (so-to-speak) behavior-activating power will result in a change in behavior. Let us designate the behavior in question (an hysterical symptom, for example) as "X," the interpretation of the historical event as "A," and the resulting symptom-free behavior as "B." What I called the instrumental theory consisted of assuming that a sequence of events such as this proves, or strongly suggests, that the events depicted in "A" are to be regarded as the "causes" and "explanations" of "X."

I mention these three somewhat divergent types or categories of "explanation" in psychoanalysis only in small part because of their specific relevance to the libido theory. More significantly, all of these explanations continue to be used in psychoanalytic writings today and have not, and do not, receive the critical examination that they deserve. Psychoanalysis, in common with all scientific theories, possesses a distinctive epistemology of its own, even if we are unaware of it. The libido theory, I submit, is the original epistemology of psychoanalysis. One of the most important assumptions, both from an epistemological and technical-psychoanalytic point of view, that Freud made in the *Three Essays* is the following:

"The distinguishing of the sexual instinctual impulses from the rest and the consequent restriction of the concept of libido to the former receives strong support from the assumption which I have already discussed that there is a special chemistry of the sexual function" (pages 218 and 219).

There exists, however, a "special chemistry" not only of the sexual function, but of every other conceivable function as well. Thus, there is a special chemistry of carbohydrate and protein metabolism, of our resistance to this or that organism, and so on, practically *ad infinitum*. From a purely epistemological point of view, where does this (and other similar considerations) leave the libido theory? In psychoanalysis shall we persist in attempts to adduce evidence in favor of, or observations and reasoning in opposition to, a theory without daring to examine what we are trying to prove or disprove (Brenner, 1956)? I sincerely hope that this monograph will contribute fruitfully to the clarification of some of our fundamental concepts and problems in psychoanalysis.

Summary

The purpose of this presentation has been to re-examine critically the concepts of libidinal zones, aims, and modes of gratification. In order to achieve

this goal, inquiry was directed toward the following questions: What kind of theory is Freud's libido theory? On what observations does it rest? What do the hypotheses that are used explain, and what is meant by "explanation" in this context? Finally, what are the logical and socio-historical antecedents of these theoretical constructs?

Libido theory, it has been suggested, is a (primitive) psychosomatic hypothesis. Its principal aim, for Freud, was to explain various "psychosexual phenomena." It thus aimed, from the start, at bridging the gap between body and mind or, in this case, between sexual anatomy and physiology on the one hand and those aspects of human behavior that were called "sexual" (by Freud) on the other hand. As originally constructed, therefore, the libido theory was not intended to answer questions formulated in a purely psychological idiom, nor was it concerned with problems of human experience and human relationships.

The concept of libidinal zones has been criticized chiefly on the ground that it involved the postulation of unverified (and probably unverifiable) physical changes in body parts. The phenomena could be more simply regarded as various ways of "using" (so to speak) one's body parts (particularly the orifices). Also, if we subscribe to this concept we must conceive of sensations in general, and of pleasure in particular, as residing in specific body parts, or emanating from them. Affect, however, is an atopical concept. As such it is a mistake to search for—and to assign it to—a physical location.

In regard to questions of libidinal aims, the principal problem is to weigh the merit of Freud's proposition that the libido aims for pleasure. This has been contrasted with Fairbairn's reformulation, according to which the libidinal aim is object contact. The role of pleasure in libido theory has been discussed further in connection with the subject of modes of libidinal gratification.

It has been suggested that the libido theory has, among other things, superimposed a medicotherapeutic world view as a moral scheme on the existing ethical belief systems of Western Christian cultures. This has important implications for so-called "psychiatric symptoms" for, depending upon our frame of reference, we shall regard perversions and hysterical symptoms either as manifestations of libidinal fixations and/or regressions (including herein physiological changes in body parts), or as (socially) "inappropriate" uses of various body parts. Finally, attention has been called to three fundamentally different types or categories of "explanation" in psychoanalysis. The first of these is essentially the same as what is meant by the "etiology" of an illness (of the body). The second refers to a process akin to that of "translation." The third type of explanation refers to a more complex notion consisting of the utilization of historical reconstruction and of the effects of human communication on subsequent behavior.

No attempt has been made to provide a descriptive re-evaluation of the libido theory, nor has any effort been made to adduce empirical evidence to prove or to refute particular generalizations inherent in this theory. Psychoanalytic literature is replete with observations and discussions that allegedly prove or disprove the libido theory or some parts of it. The libido theory is,

however, the original epistemology of psychoanalysis. To marshal evidence in support of the libido theory, or to report observations that can be said to be consistent with it is, in the light of the present historical position of psychoanalysis, no longer of any value. The time has come, it seems to me, when it might be more profitable for us to re-examine and redefine exactly that with which we agree or disagree and to base our judgments on verifiable observations.

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Discussion of the Paper

NEVITT SANFORD (*Vassar College, Poughkeepsie, N. Y.*): As I read Thomas Szasz's contribution I received a curious impression. The criticisms of the libido theory offered at its beginning seemed to me to be rather harsh and not as cogent as one might have expected, and I began to wonder whether it dealt with a point of view or over-all perspective quite different from that in which Sigmund Freud regarded the same phenomena. It was not until I came to

the reference to W. R. D. Fairbairn that I understood the general import of the paper. Szasz wishes to approach the basic phenomena of psychoanalysis with the use of a general theory of object relations. If one makes use of such a theory he will most certainly conceptualize psychoanalytic observations in a different way than did Freud. One may very well conceptualize them in a more adequate way, but this does not necessarily mean that his criticisms of Freud will be valid. I am certainly interested in the kind of thing that Szasz is doing, and I believe that I am sympathetic with his purposes, but I am by no means sure that his criticisms of the libido theory are always justified or that they proceed directly from his preferred conceptualization. In short, the new conceptions of Fairbairn and Melanie Klein and Szasz must be examined on their merits, that is, with attention to their ability to marshal the facts and to suggest new lines of investigation. I doubt that the creation of this new type of theory proceeded from an awareness of such deficiencies of the libido theory as Szasz wishes to demonstrate in his paper. I think it is more likely that the new theory came first, being suggested by certain relevant observations, and that the criticisms of the libido theory came later and stand as an attempt to gain support for a developing orientation. Just as the new conceptualizations must be considered on their merits, so must the specific criticisms of the libido theory be considered with attention to their intrinsic validity.

Let us examine some of the specific criticisms. It is quite surprising to find that Freud is accused of opening the way for the creation of a diversity of different instincts or drives. I have heard a great many criticisms of Freudian theory, but this one is new to me. I have always understood that the most characteristic thing about the libido theory was its parsimony with respect to the postulation of instincts. The essence of the Freudian theory had seemed to be that it posited just two instincts, sex and aggression, and the characteristic complaint of psychoanalysts against such writers as Karen Horney and Harry Stack Sullivan, as well as of a great many psychological theorists such as William McDougall and Henry Murray, was that they wanted to dispose of the libido theory by positing a variety of instincts or drives equally as basic as sex or aggression. It is very curious to have Szasz reverse this entire situation and accuse Freud of the very thing of which good Freudians have been accusing deviationists. Szasz may have found some basis for this in something that Freud said in the *Three Essays on the Theory of Sexuality*, but I am inclined to doubt that he has here offered a valid critique of what is most essential and most characteristic in the libido theory.

A little later we find a criticism that takes on the aspect of the demolition of a straw man. Szasz here takes Freud to task for indicating his concern to express the phenomena of observation in the language of his theory and thus supposing, apparently, that describability is a sufficient criterion of the adequacy of a scientific theory. This seems to me to be playing with words, or taking too seriously or too literally something that Freud said at one time or another, and neglecting the general import of his writings offered at various times and in various places. Whatever else the libido theory may be, it is not a description of anything, and I do not believe that Freud ever intended it to be one. The theory involves hypothetical constructs from start to finish and is

most essentially a body of propositions concerning relationships among these constructs. It is true that Freud talked a great deal about chemistry and about apparently quite tangible physical processes, but these were certainly not things that he observed or intended to observe. I suggest that Freud was simply using a physiological model, and that in the last analysis there is no essential difference between a physiological model and the more formal models that are popular at present. The fact that one uses words referring to physical or physiological states or processes does not mean that the constructs are any the less hypothetical or that one is freed from the requirements of formal model-making.

Again, it seems to me quite extraordinary to suggest that Freud was concerned with demonstrating the dependence of human sexual behavior on anatomical or physiological factors. I submit that Freud set out to construct a psychological theory of human sexual behavior, and that he indeed did so. Since the hypothetical physiological processes underlying all behavior cannot be known by physiological or neurological investigation, we must proceed by psychological investigation, and on this basis make inferences concerning the physiological. This concept has been a great boon to psychology. Indeed, this way of proceeding is still as respectable as it is necessary. Freud was using physiological processes in his model-building in much the way that most psychologists do today. I do not believe that he was any more interested in demonstrating the obvious than we should be today. Once again, it seems to me that Szasz has taken a few sentences from Freud and, by giving them a very literal interpretation, missed the major feature of what Freud was doing.

The same thing might be said for Szasz's comment about the "extremely obscure statement" that Freud made in assuming that excitations arising from the somatic organs were based on processes of a chemical nature. The statement does not seem at all obscure if one considers that Freud did not observe any chemical processes, but that he observed, as he says he did, certain psychological phenomena of neurotic illness and used a set of hypothetical constructs involving some terms from chemistry in trying to make sense of these observations.

Finally, Freud is accused of taking the view that sensations are actually located in bodily parts, that they reside in or emanate from such parts. I think that here Freud was simply indulging in a manner of speaking. I do not believe that Szasz would wish to deny the existence of correlations between experience and events occurring in bodily parts. Of course, he does not wish to admit that such correlates might be one to one, or that the quality of experience is to be explained altogether by any events in bodily parts, but I find it difficult to believe that Freud would want to admit this either.

By the time we have come this far in Szasz's paper, it becomes clear that he is introducing an organismic and social-field theory of psychological functioning. Here he is undoubtedly on firm ground; he is participating fully in the modern view, but the above illustrations suggest that his general theoretical orientation and preferences have led him to some excess in his critique of the libido theory. This seems unfortunate, because there is certainly nothing wrong with having such an over-all bias, particularly when it partakes so fully

of the modern orientation in science as do Szasz's views. What really troubles me is the impression that modern writers who wish to make advances in psychoanalytic theory are, as it were, too aware of Freud's vast shadow. They are over-eager either to show that Freud actually said in effect what they now propose, or to show their difference or separateness from him. Szasz, I think, is expressing something of the latter tendency. Since his general conceptualization might very well stand on its own merits, it is unfortunate to create attitudes toward it by being so severe with Freud that even so disinterested an observer as myself is moved to rise to the master's defense!

Szasz's point that we should not derive ethical principles from what is natural seems to me very well taken. One might say, as did Rabelais a long time ago, that if it is natural to gratify our instincts, it is just as natural to construct defenses against them and to strive for higher and more complex modes of functioning. I warmly agree that it is impossible to draw conclusions concerning what we ought to do from a consideration of what we tend naturally to do.

It is well to remember, too, that Szasz's criticism of Freud is still quite applicable to many other writers; for example, to many psychiatrists and, of course, to Alfred Kinsey. It is interesting to note that the naturalistic basis for ethical norms has come into modern thinking under a different guise. I refer to the current accent upon so-called natural growth trends—the belief that man naturally grows and develops toward maturity, and that maturity is good. However, maturity is vaguely defined and not well understood; hence numerous writers tend to bring under that heading numerous preferred virtues, and then to suppose that, since growth is natural, these virtues are actually based in man's nature. This, of course, is an attempt to oppose the extremely relativistic ethics that prevailed in social scientific circles until World War II. One must feel sympathetic toward this attempt because it has become quite clear that complete cultural or subcultural relativism is inadequate. Although we can never arrive at a complete system of ethics by studying psychology, we can contribute to ethics by discovering and pointing out the causes and consequences of actions. What Szasz objects to most strenuously is the biological orientation of Freud and the excessive emphasis placed upon biology by some of our contemporaries. It may be that in our consideration of ethics we cannot escape completely from the nature of man, but we can certainly avoid the abnormal stress upon biological man.

I disagree with Szasz when he says that the timetable according to which different zones are successively libidinized falls outside the scope of psychoanalysis. It seems to me that the timetable has always been one of the most essential and characteristic aspects of the libido theory, and I do not believe that Szasz should just dismiss it, as he does. Moreover, I disagree with the proposition that psychoanalysis as a science is characterized by its distinctive methods of operation rather than by its subject matter. I still like the idea that in psychoanalysis we have a more or less integrated body of concepts and theories, and that the methods flow from these concepts and theories rather than in the other direction. I should say that there are other methods besides the psychoanalytic one for testing psychoanalytic hypotheses, and that these

hypotheses are no less psychoanalytic for having been tested outside the consulting room.

I believe that Szasz is on firm ground when he criticizes Freud's assumption and postulation of pleasure as a principal feature of the libidinal aim. The same criticism was effectively made by McDougall[1] in the early 1920s; I think it has become the common tendency among dynamic theorists to speak of the tension-reducing or equilibrium-restoring, rather than the pleasure-giving, functions of striving. In practice, however, I do not believe that this has made much difference. The most essential constituent of Freud's theory, it seems to me, is the element of striving, with such closely associated concepts as goal states, goal objects, and substitution. It is this that makes Freud's theory an action theory, and that has accorded it a leading place among the action theories in psychology.

Like Szasz, I have been much impressed by the work of Fairbairn, and I am in sympathy with his tendency to put the stress on object-seeking. Some problems remain, however. It seems to me quite doubtful that all animal and human actions are, from the beginning, essentially object-seeking. It still seems likely that some things happen without objects, and without the purpose of finding objects. One could ask, in fact, why humans and the other animals seek objects. Perhaps it is because of what the objects might do for us, and what they might do for us might have much to do with the tensions that tend to become associated with particular body zones. It is important, also, to face the question of whether the object-seeking that is stressed by Fairbairn and by Szasz is essentially social psychology from the start, or whether the objects are what Freud would call part-objects. If one accents this latter, one moves closer to the classic Freudian theory; if one accents the social object, one inevitably moves in the direction of Sullivan and Horney.

I also share Szasz's view that it is not necessary for us to be physiologically oriented, and that this orientation has acquired a respectability that it does not deserve. It is, I think, fair to say, with Szasz, that there is a great deal, indeed too much, of this orientation in Freud. Nevertheless, I have the definite impression that, were Freud alive today and interacting with our modern physiologically oriented psychologists, he would definitely be "on our side." In fact, I have always had the feeling that, despite all the physiological and biological terms in Freud's writings, he was fundamentally on our side from the very beginning.

Reference

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Lawrence S. Kubie (*Yale University, New Haven, Conn.; Columbia University, and New York Psychoanalytic Institute, New York, N. Y.*): My misgivings about the libido theory are not new. I have expressed them and developed them in print repeatedly.[1-6] I discussed this issue in full in a paper read before the meeting of the American Psychoanalytic Association in St. Louis, Mo., in 1952, in which I considered specifically the significance for the libido theory of recent developments in our concepts of brain physiology. I

have not yet published this paper. In it I pointed out that Freud's original conception of an instinct is a valid concept, that is, it is the demand that the body makes upon the psychological apparatus. Then for various reasons he interposed between instinct and behavior an abstraction called the libido, which he envisaged as a fluid energetic process, derived from sexual needs. No one can disagree with Freud's argument that something is needed to explain the fluidity and interchangeability of drives. One can question, however, whether this particular formulation is really suited to this purpose and whether it conforms to our growing knowledge of neurophysiology.

My own conviction is that the libido theory violates much basic knowledge both of energetics in general and of the physiology of the nervous system in particular, and that it is possible, through a proper expansion of our understanding of the functions of the symbolic process and its influence on instinctual processes, to get along well without it. If we try to use libido to explain the fluidity of instinctual processes and their interplay, one finds it necessary to represent every biochemically derived drive by a special libido, with the result that one has less fluidity than is provided by instinct alone plus superimposed influence of the symbolic process as the mechanism of their interplay.

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SANFORD: For the present we must leave to one side the question of how many instincts we must posit ultimately, even leave to one side the question as to whether the word libido is to be used for sexual energy or for all cyclical energy, whether we are to have a sexual libido in Freud's sense, or are to have a fundamental need for objects, as in Fairbairn.[1] It seems to me that the type of explanation involved here is just that facet of psychology that accounts for much of its progress, namely, the type of explanation according to which we observe diversities in behavior, thought, and meaning, and learn to attribute a single underlying determining tendency, the diversity at the observational level. It is in this manner that psychoanalytic insight so often expresses itself. I also suggest that this is a major purpose of the libido theory, and that it still serves this purpose in Freud's work and in our own. I disagree with Szasz that Freud's intention was to show the dependence of sexual activity upon physiological functioning. I think that this concept is incidental, and that Szasz has taken a particular paragraph from Freud and drawn implications from it that are not altogether correct in the context of

the whole of Freud's psychoanalytic work. In my opinion Freud's purpose was to compose a psychological theory that would enable him to make sense of his psychoanalytic observations. Freud was correct in saying that his major inferences were made from what his patients said and did. When he spoke of special chemistry or processes in the sense organs, I do not believe that he did so as a physiologist or neurologist, but was using what today would be called physiological models. There is a considerable difference between using physiological models and being physiologically oriented in the sense that one must measure things physiologically and correlate them. I also feel that the distinction between a physiological model and a formal model (and I am sure that Szasz refers to the formal model) is rather overdrawn. In the last analysis the physical physiological model must likewise be a formal model. We may abandon the entire libido theory, but not, I hope, the type of approach to the explanation of psychological phenomena that the libido theory represents as a formulation that not only correlated observations that had been made, but that formed the basis for hypotheses concerning observations that could be made and gave us access to doubtful areas for tests of the hypotheses.

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1. FAIRBAIRN, W. R. D. 1952. Psychoanalytic Studies of the Personality. Tavistock. London, England.

KUBIE: We should re-evaluate this problem in relation to the stage that science had reached at that time. Physics was concerned primarily with hydraulics, heat, mechanical energy, and the transformations of electricity into heat and mechanical energy. The interchangeability of various forms of energy made it necessary to develop a concept of energy that could explain this. Freud's first concept of psychic energy was that it was a direct expression of instinctual processes. Later, he came to feel that he needed a more abstract concept of psychic energy to explain the interchangeability among the different forms that instinctual forms assume. It was out of this need that the libido theory developed, as an analogue to the energetic concept then dominant in physics. Libido, although sexually derived, was a fluid psychic energy that explained the interchangeability of types of behavior. It is my conviction that although it was natural to formulate the concept in such terms, the analogy does not stand up and has led to many fallacies, especially to the illusion that we have explained a behavioral phenomenon when in fact we have merely described it in terms of a metaphor derived from another science. I believe further that if we look too closely at the influence of symbolic processes on instinctual processing in man that this will be found to provide a more direct explanation of the phenomenon with which Freud was concerned. Moreover, this approach makes superfluous the libido hypothesis, with its anthropomorphic distortions.

MORTIMER OSTOW (*New York, N. Y.*): It seems to me that Freud himself anticipated this particular objection of Szasz to Freud's formulation of 1905.[1] The difficult and deceptive thing about studying any of Freud's papers in

isolation is that his views were never static; many times when we see an objection to his thinking in one paper we find, in a paper of his written one, two, or five years later, that he has already considered that objection and attempted to rectify it. The idea that a sexual chemistry is the basis for libido was Freud's concept in 1905. Subsequently he himself took up the question of the other instincts, which he called "ego" instincts. However, in his paper *On Narcissism*[2] he saw the difficulties arising from attempting to distinguish one small group of instincts from another small group on the basis of specific chemical, endocrinological, or physiological functional apparatus and, therefore, he proposed to dissociate the concept of libido from any kind of particular chemistry. Furthermore, in 1914 he attempted to incorporate what he had hitherto called all of the ego instincts into the group of libido instincts, namely, all of those activities that are performed essentially for constructive synthetic biologically useful purposes. Freud himself, it seems to me, anticipated Szasz's criticism and thus reformulated the libido theory as entirely separate from sexual chemistry.

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Szasz: I should like to make a few observations in the hope of refocusing the discussion, because I want to make clear that it was not my intention to present a paper *on* Freud or to evaluate *all of* his contributions. I realize that Freud said many different things, so I am well aware of what Ostow has just said. I agree that his point is well taken, but I have tried to make it clear that I was discussing the libido theory and, if this is to be done, we must agree on where to begin and where the so-called libido theory is set forth. Is it set forth in *Inhibition, Symptoms and Anxiety*,[1] or is it set forth in the *Three Essays*,[2] which, in fact, Freud revised in 1925 and republished in the same year? I suggest that we restrict ourselves to what he said in the latter book. If he said something else elsewhere that contradicts it, that could again be separately examined for its validity. Kubie, if I understand him correctly, has already voiced my feeling fairly exactly. It is not a question of whether the libido theory was worthwhile when it was propounded. Unless we look at this in historical context, as has already been suggested, not only in terms of how Freud changed his views, but also as to what the theory means to us today, this discussion will have little meaning. There is no doubt that the theory was useful in its time; if I may be permitted an analogy, I shall compare the libido theory to the theory of ether in physics, which was certainly one of the most useful concepts in physical thought, although it surely has not been useful since the discovery of spontaneous radioactivity by Henri Becquerel in 1896 and subsequent developments in physics.

The question, generally speaking, is this: on the basis of our present knowlege, to what shall we orient ourselves in Freud's writings? The more we attempt

to relate ourselves to what is good or useful in Freud's works, the less validity my criticism will have. However, the more we see the limitations of Freud's libido theory, the more cogent and valid, I believe, my thesis will appear.

Once more, let me make clear what I have attempted here and, of equal importance, what I have *not* tried to do. I have not tried to criticize Freudian psychoanalysis *in toto*, nor, on the other hand, have I eulogized it. What I have tried to do was simply to take the libido theory (or, better, some parts of it), examine it, and see, as it were, how it was put together, how it works, and what its limitations are. In this connection I must also add that I do not agree with Fairbairn in all of his views, nor do I think that, thus far, he has succeeded in presenting a coherent object-relation theory.[3] If such a theory existed, I think it would be better than the libido theory. We do not yet have one, although Fairbairn is working on it. I have tried to make my own small contribution to it, as have many others, and I think that this is a fruitful line of endeavor. However, I do not believe that we need a whole scheme that we can match against the libido theory in order to see which is the better.

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Arthur Mirsky (*University of Pittsburgh Medical School, Pittsburgh, Pa.*): I do not think that we can discuss the whole concept of the libido theory until we have heard all three papers dealing with the subject. If I understand the significance (or, rather, the direction) of Szasz's paper, it was a warning that we must take great care with the degree with which we mix operations. I feel that Szasz did an excellent job in pointing out the admixture of operations, the physiologizing of psychiatry and of sociology and the psychologizing of physiology that we find throughout Freud's writings. Were anybody to say that Freud thought in psychological terms, it would be a denial of fact, because he obviously thought in the physiological language that many of us who were trained in physiology find easiest to use, even though it is erroneous. The major point that I see being developed in Szasz's paper is a plea for the proper use of operation. I do not think he means to infer that there is not a chemistry; of course there is a chemistry, but we cannot psychologize in terms of it. This is essentially the point that I see as the positive aspect of this discussion.

Panel Speaker: Do we mean in our discussion the libido theory that was written in terms of pleasure, or do we mean libido theory in its more general formulation as, for example, defined by Rapaport[1] in showing that the libido theory in some very essential way is simply a kind of action theory? The so-called model that Rapaport uses is a very common and a very generally accepted one, I think, in the psychological sciences today. I mean the concept of some kind of force in such matters as the nature of strivings, the setting of

goals, and the distinction between goals or aims and goal objects. This does not evoke any necessity for speaking of pleasure either as a physiological entity or as an experience; one may conceive of the end state of that striving and treat it in some completely objective way. The critique of the pleasure, the *hedonism* in Freud's theory, of course, has been made for a long time; I remember McDougall making this point in the early 1920s[2].

If I understand him correctly, Szasz believes that the manner in which we conceive of pleasure and the nature of pleasure as an experience is very important, but I should like to know whether, in discussing the libido theory today, we are talking about this general conception of an action theory of behavior, or about the seeking of pleasure as essential in libido theory.

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Leopold Bellak: I should like to narrow the discussion a little. I think that thus far it has been doing precisely what we hoped it would do: namely, assess various aspects of Freud's theory. However, I must remind you that Szasz addressed himself primarily to certain aspects of the libido theory, to zones, aims, and modes. Much of the discussion has really centered on energetic aspects of the libido theory that Eugene Pumpian-Mindlin discusses elsewhere in this monograph. I think that we can discuss the relevance of aims, zones, and modes for an action theory, examine its values per se, and examine what Szasz had to say about it. It is yet to be validated or disproved that there is such a thing as a maturational sequence of, as I like to put it, preferred choices of pleasure; for example, the oral, the anal, and the genital. Szasz had made some very good points in suggesting that pleasure or affect cannot very well be ascribed to a particular part of the body, and this opinion may need further reconceptualizing to put it in a scientifically acceptable way. However, it seems to me that the principal question to which we must address ourselves is this: Is the whole theory of postulating a sequential series of zones valid or not? If it is, what is the best way of putting it? If it is not, what can we substitute for it?

The same thing, I believe, holds true for the theory of aims.

When Szasz quotes Fairbairn[1] in saying that in infancy, owing to the constitution of the human organism, the path of least resistance of object relation happens to lie almost exclusively through the mouth, he may need to be more explicit than Fairbairn. Does he acknowledge that, maturationally speaking, the oral zone is particularly preferred at that time for gratification? We cannot very well say it "happens" to be. It is either part of a hypothesis or it is not. If it is not, we must reject the hypothesis and substitute another one for it.

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PANEL SPEAKER: I feel very much the need of understanding more about what kind of conception is to replace the idea of localized senses of pleasure and of pain. I am sure that you must have something in the way of reformulation that would help here, but it seems to me that some alternative system should be provided before we discard the fact that erogenous zones seem, phenomenologically, to be quite beyond question.

SZASZ: I am very glad that we have come to a more specific point on which I have a number of thoughts that were not included in my paper. Specifically, in relation to the zones, I tried to call attention to the difference between what we observe and the existing theories. What we observe is the dominant use of the mouth; the question is, how much of this is learned. This oral behavior is not inevitably, absolutely, and somatically determined in the same sense that genes determine the color of one's eyes. For example, many of you know the work of Engel and Reichsman[1-3] with a young child who could not take food by mouth from early age on and was fed through a fistula and did not develop many of the oral characteristics of "normal" babies.

Here we have some experimental evidence for the possibility of approaching an even broader area; namely, the implication of the libido theory for hysteria. As I suggested, Freud implies, in the libido theory, that there are some physiological changes in body parts that are involved in hysterical mechanisms. This is a theory of about sixty years' standing, but still there is no evidence to support it.

The alternative explanation that I suggest has not actually been mentioned thus far. It has impressed me for some time that in many of these instances we are dealing with an "illegitimate" use of body parts. When a child sucks his thumb, you can see that he does so because he derives pleasure from it. Equally obviously, however, the child is doing something that its parent does not wish it to do. This may seem like a rather simple-minded reformulation, but I suggest that we consider it.

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PANEL SPEAKER: You would not say that this is the only reason the child does it? There are other things that he could do that would displease the parents.

SZASZ: True, a child may do a great many things displeasing to the parents. However, my point is that insofar as thumb-sucking is displeasing to the parents, they will tend to ascribe a greater-than-average pleasure content to it. Before long the behavior will have complex (symbolic or communicative) meanings in relation to the child-parent interaction and to the child's relationship to his body. My aim is merely to emphasize this, and perhaps to de-emphasize,

relatively, those theories that explain thumb-sucking on the basis of inborn "organic" factors.

PANEL SPEAKER: Are you reducing the motivation of "thumb-to-the-mouth" behavior simply to revolt against the parents?

SZASZ: I am certainly not suggesting this as a total explanation of thumb-sucking.

PANEL SPEAKER: Then other motivations are required?

SZASZ: I am sure that a great many additional things are required. I simply address myself to the proposition that there are changes in the skin of the thumb that give pleasure to the child. This is what Freud said and what the libido theory says. Similarly, when in adult life we speak of fistulous subjects, it has been theorized that the fistula opening of the abdomen becomes eroticized, that is, it becomes an erotogenic zone. Why could we not simply assume that the person becomes used to the fistula in much the same way that a trumpet player becomes accustomed to his trumpet? The thumb becomes an important object, and the fistula in the stomach becomes an object, just as does a slide rule for an engineer, a trumpet for a trumpeter, or a book for a bibliophile. The fact that the thumb is a part of the body has misled us as medical men into some kind of physiological idea. This is merely a suggestion. It may be quite incorrect, but I want to make it clear.

BELLAK: What Szasz suggests is primarily to substitute, as the basis for the libido theory, a learning theory for a maturational-genetic theory. It seems to me the most one could argue about is the percentage contributed by *Anlagen* to the choices as compared to the percentage of contribution by learning. Szasz holds out for the position that 90 per cent is contributed by learning and only 10 per cent (Szasz will correct me if I misquote him) from the *Anlagen*. Generally speaking, traditional psychoanalytic theory would almost reverse the proportions in childhood and, later in life, would tend to see them as about equal.

SZASZ: Yes, this is what I meant. In other words, let us examine specifically each of the major problems with which we deal, such as hysteria, schizophrenia, and homosexuality. I think that in most cases we would find that the behavior pattern in question was not 90 per cent maturational-genetically determined. One could, of course, use maturational-genetic theories even where they do not fit, or fit very poorly, since in psychoanalysis we possess few safeguards against such theoretical practices.

BELLAK: Another point that Szasz has made is that thumb-sucking must be understood in field terms; that is, it is the significance of the sum-total functioning of the individual in a complicated social situation that must be perceived in order to understand the particular action in this case, thumb-sucking. One must see it in terms of its meaning in respect to some total process of the whole person and the pattern of one's social relationships with people in the environment. The movement is from a special proposition unto the direction of a more general theory.

This direction is one in which I think psychological science in general is moving; and I, for one, could certainly agree with Szasz in this instance.

However, we must beware of some of our colleagues who wish to make the whole thing a kind of social psychology from the very beginning. One of the dangers might lie in the fact that what is generally a secondary aim might be substituted for a primary aim. The social psychological superstructure is usually within the secondary aim rather than the primary aim, and thus is superficial.

EUGENE PUMPIAN-MINDLIN: (*Veterans Administration Mental Hygiene Clinic, Los Angeles, Calif.*): Let us retrace our steps a short distance. It seems to me that we must consider the reasons for the formulation of the libido theory in the terms of the historical situation with which Freud was faced; the evolutionary concept had just been introduced, and Freud really applied the concept of evolution to mental phenomena. Up to that time mental phenomena had been divorced from those of the body. The explanation of psychological phenomena was in the hands of the philosophers, and Freud was afraid of being accused of being a philosopher, although in many respects he was one.

It seems to me that the essential purpose of the libido theory was to link the body and the mind, which had not been done previously; that is, to define some nonpsychological process that served as a basis for psychological behavior or for psychological phenomena. Freud chose the sexual sphere and used "libido," but there were hints in his work that he was not fully satisfied with this concept. He revised the theory many times and, on occasion, even considered discarding it except for the fact that it was important for him to maintain the nonpsychological basis of his system. I do not believe that he would care very much how it is formulated as long as this essential factor is retained. We can reformulate it within this limit.

It seems to me that what we have not examined is just what cannot be included in the libido theory as it is classically formulated. Analysts have not really conceptualized such important functions as walking, talking, and motor skills because we are limited by the nature of the libido theory and are only now beginning to broaden it and to recognize that these functions are significant. As a matter of fact, we fell into the same trap that caught many of the physiological psychologists and certainly ensnared many of the biologists. We almost consider these functions as epiphenomena of sexual activity, but we know that they are not epiphenomena. They are as much a part of the individual as anything else, and I think this is where the libido theory has trapped us or limited us. I think that what Szasz tried to do in his paper was to point out that we must broaden our nonpsychological basis of considering human behavior in order to conceptualize more psychological functions than we now can by the use of this theory.

KUBIE: I wish to point out that Freud's development paralleled closely that of Pavlov. Therefore it perplexes me when people emphasize the dissimilarities instead of the similarities between the two, and their significance. More specifically, this comment relates directly to the question that Sanford has asked and that still remains unanswered: What is the role or the limitation of the pleasure principle in relationship to libido function?

When we bring that question down to its concrete components, we find that we must first explain plasticity of behavior in general and must ask to what extent pleasure, however it may be defined, explains plasticity. At the same time, we must also explain the escape of behavior from the domination of either the pleasure principle or the reality principle; because if behavior never escaped from the domination of pleasure or of reality, we should never have mental illness. We must somehow understand how the escape from the domination of those two basic influences can occur. Whenever it does occur we encounter the whole range of the phenomenology of mental illness: stereotype, rigidity, and insatiability, that is, the obligatory repetitive qualities that characterize all such illness. There is no type of behavior that constitutes illness if it occurs but once. It is only when such behavior loses plasticity and can no longer be varied in response to either external or internal stimuli that it becomes illness.

In explaining this, it is necessary to add one other basic consideration: namely, that in no human instinctual process is the amount of the instinctual activity related to the amount of the underlying biochemical requirement. We do not even breathe merely to keep us in supply of oxygen and to eliminate carbon dioxide. There is not a moment of respiration the rate and volume of which is not influenced by affective and symbolic processes, whether awake or asleep. This is equally true of drinking water, certainly of the ingestion of food, of excretory processes, of sex, and of all the homeostatic-homoiothermic processes that make up the instinctual constellation.

Since in man there is no direct relationship between the biochemical base from which instinctual activity is derived and the amount of need-serving behavior, then obviously we must find some other way of formulating that relationship. Freud's libido theory was useful temporarily. However, the theory has many dangers, and it is being misused to such an extent that it no longer is the best description or explanation of plasticity or of the imposition of fixity.

Ostow: To return to the question of the zones that Szasz has raised, it seems to me that, in reality, there are two questions. While I agree that it is fairly sterile to reduce such a discussion to textual comparison, nevertheless, it seems to me that, as Stanton has remarked, the important problem is, how are these concepts used at the present time? Certainly the concept of a libidinal zone is not used now in the same way that Freud used it in 1905 in the description that was read to us by Szasz. We currently use the term erogenous zone in the following way: we assume that an instinctual drive appears within the human psyche, a drive that is to be consummated by contact between the individual and his object, employing an anatomical zone for this purpose (what we might call a contact apparatus). We also assume that psychically this craving is projected upon the anatomic zone, that is, upon the contact apparatus itself. We do not assume that the mouth or the eye or the genitals themselves give rise to the drive or give rise to the pleasure. We assume that the affect and the drive are created within the psyche and, therefore, presumably in the brain. These zones are erogenous only in the sense

that upon them is projected the need or craving; the zones themselves must make physical contact before the craving can be satisfied. That, I believe, is the way the concept is used at the present time, and that is also the last of Freud's formulations of the anatomical zones.

The second question that Szasz raised and that he considered at the same time is: Why are these various classic contact apparatuses preferred? Are they merely learned? Is it merely as a result of experience that the individual learns to prefer the mouth, or is there a constitutional basis for selecting first one zone and then another, in the course of maturational development, in which satisfaction will be sought?

KUBIE: We know more about the development and maturation of sexual drives than of others because more attention has been paid to the development of the sexual instinct and its derivatives. Those who have done much work in this field have found that the higher the animal's stage of evolutionary development, the larger is the role played by psychological implications and the smaller is the role played by endocrinological determinants. Furthermore, this applies to the determination and the initiation of sexual behavior, its frequency and duration, as well as to whether the animal assumes a masculine or a feminine posture and to the apertures or zones used. This does not eliminate the role of endocrinological or other determinants.

OSTOW: That is merely determination in terms of activation of behavior and amount of behavior, not selection of zones. You refer, I believe, to the work of Beach and Ford,[1, 2] who formulated it in just that way. However, what these authors meant was the activation, synchronization, and timing of behavior; but even they do not question the constitutional basis for the selection of the preferred contact zone at any level.

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SANFORD: Some of my remarks about this topic actually have more to do with the sociology of current conditions in psychology, and perhaps also in psychoanalysis, than with other fields. What I think we must be concerned about is the danger that, having introduced the idea of social relations as an important determinant of something like thumb-sucking, too many of our colleagues will wish to eliminate sex altogether! When one considers something like curiosity, a great many people think it should be said that it has nothing to do with anything in the early sexual life of the individual. This curiosity, after all, is a need or drive that comes full blown upon the scene, and it is ridiculous for psychoanalysts and others always to look for some hidden aspect of it. It is still important, in putting these particular sexual activities in a broad social context, to leave room for the observations that Freud has made.

As for Szasz's question on ethical concepts, I wonder whether we do not also find this tendency to derive ethical norms from generalizations about

"how people are" in other areas. For example, when Erickson,[1] speaks of growth trends, does he not mean the same kind of thing? In a way, we are supposing that certain kinds of things that people naturally do are really good because they lead to various consequences. If we are not to do that, what is to prevent us from being totally relativistic with respect to such things as cultures and subcultures? In other words, if we are to avoid this tendency in Freud to give us a kind of naturalistic ethics, then what are we to do about ethics? In what respect will the object-relations theory be superior to the libido theory from the ethical standpoint?

Reference

1. Erickson, E. E. 1950. Childhood and Society. Norton. New York, N. Y.

Bellak: I should like to discuss Sanford's point a little. I think that he addresses himself to Szasz's statement in which he took exception to Freud's position that sexual activity should be copulation, and that he, therefore, sees perversion as something unhealthy. I think ethical and cultural relativity can be overdone. In the past I have sometimes tried to define Horney's view of object relations by saying that "in our culture man has a penis, and it is nothing but a link for interpersonal relationships." I doubt it very much. Freud was probably influenced to a considerable extent by Schopenhauer's will to live in his teleological ideas on the aim of sexual activity as copulation and recreation. However, the point must be made that, by-and-large, copulation by man with animals is neither the norm nor along the main line of biological activity; it would be a mistake to obscure this fact in ethical "broad-mindedness."

1. Horney, Karen. 1937. Neurotic Personality of Our Times. Norton, New York, N. Y.

Kubie: We are running into difficulties because of a tendency to lose sight of the fact that there is no human activity, however individually or socially valuable it may be, that cannot become neurotic. There is nothing abnormal about eating, but an eating compulsion is unhealthy. There is nothing abnormal about philanthropy, but there are people who are compulsive do-gooders. There is nothing abnormal about adolescent rebellion unless it becomes caught in obsessional and compulsive mechanisms that make it obligatory. There is certainly nothing abnormal about working hard, but there are compulsive workers, as we all know. Consequently, the mere fact that one can correctly attach a value judgment, to wit, that it is useful or not useful, creative or destructive, social or antisocial, does not determine whether or not the activity is normal or neurotic.

Panel Speaker: Is not Kubie's criterion of plasticity versus rigidity an ethical value? The real question seems to be whether the individual is able or unable to do something; actually, it seems to me this is the way we consider perversion. I do not think that we consider it in the sense that it does not lead to procreation or conform to our mores, but whether the individual is able to utilize a particular form of activity or is even compelled to utilize it;

this is our criterion, not the ethical one or whether such activity is usual in a given society. The mere fact that colds are so common does not make them normal.

PANEL SPEAKER: The important point that has been brought up is not to derogate the use of ethical concepts, but to recognize that we are using them. We must recognize them in the sense in which we are using them so that with a new ethic we change that particular concept. For example, let us consider a peculiar situation in psychophysiology. Electrodes placed in certain areas of the brain serve as pleasurable stimuli, whereas in certain other areas they serve as unpleasant stimuli. The characterization of pleasant or unpleasant is based on what the subject likes or dislikes. If damage to the brain or self-induced electric shock to the brain is pleasurable, we shall have to change some of our concepts of the word pleasure.

PANEL SPEAKER: It seems to me that the point that Szasz made is not that we should discard ethical values, but that we should make them explicit where they have acted implicitly. Is that correct?

SZASZ: Exactly. In spite of all the work that has been done in psychoanalysis both empirically and historically, I am struck by the degree to which this problem has escaped attention. I have tried to do no more than this, although you and Mirsky have stated exactly what I wished to express; I think it has escaped attention because an ethical model has actually been used, but it has been disowned as being ethical. This is essentially like saying that our particular form of government is the right form of government and that this is not an ethical statement. Now, the judgment that we used was that of medicine, that is, the concepts of health and illness have been used as ethical criteria. This has the profoundest importance for psychotherapy, for these concepts determine whom we consider sick and therefore in need of therapy, and whom we consider well and therefore dischargeable. This has plagued us in a very practical sense and goes far beyond libido theory. I think that this is solely a problem of ethics. Rather than construct an ethic that may appear to me or to someone else to be superior to that implied in the libido theory, our task, first, should be to use the psychoanalytic method to expose hidden ethical implications such as those at which I was hinting.

I have one more point to make. I think that another reason why this ethical problem has not been faced is that our roles as practical therapists and theoreticians clash. I do not believe that we can, or should, practice ethical relativism in the consulting room where, on the contrary, adherence to certain clear-cut norms is usually necessary. (We can, however, always take a self-reflecting, analytical attitude toward the norms to which we, or the patient, may wish to adhere.) However, in our role as scientists, outside of the consulting room, we should feel free to study and pursue the relationship between psychology and ethics, wherever such inquiry may lead. Psychologists, and particularly psychoanalysts, have steered clear of this area, to which most of the contributions thus far have come from cultural anthropologists and, of course, men of letters.

OSTOW: I have greatly enjoyed Szasz's paper and his discussion because he keeps one constantly off balance. We are all accustomed to certain cliches

and stereotyped arguments against psychoanalysis. What Szasz seems to have the genius to do is to take those arguments that are obviously untrue, and turn them 180 degrees backward and direct them at psychoanalysis. Sanford commented on this earlier in this discussion when he said that this is the first time he had ever heard that particular criticism of the libido theory. Generally, the criticism runs the other way, saying that psychoanalysis is unethical and that it encourages immoral behavior by sanctioning it as medically good. I was astounded to hear Szasz contend just the opposite; namely, that psychoanalysis is not only not unethical, but attempts to impose an ethic. It seems to me that the reply to Szasz's position is exactly the same as the reply to the opposite position. When Freud writes about what is and what is not perversion, what is normal and what is abnormal, it seems to me that he contends that in our culture certain behavior is what we currently consider normal living and that deviation from such conduct is what we define as perversion.

Let us begin at this point and examine these clinical phenomena. I can show you that they are actually represented in some way or other in every so-called normal individual human being and in every illness. Freud does not propose that what is now considered normal should be so considered eternally. When he writes of the aim of instinctual gratification he says that it is the union of two individuals for the accomplishment of some biological purpose. He does not say it explicitly, but he implies that in our society we normally think of this as ordinary copulation because, in a naïve naturalism, it was assumed that since copulation is the aim of sexuality in animals, it should necessarily be the aim of sexuality in humans as well. Freud goes on to say this is not true, that copulation is not the only aim of genital behavior in humans. He recognizes that there is such a thing as forepleasure, including entirely normal aims that are not reproductive. It seems to me that he leans over backward in an attempt to avoid imposing any possible kind of ethical restriction or ethical superstructure.

Szasz's criticism, it seems to me, while sound in a sense, does not apply to Freud. It does apply, in my opinion, to very many psychologists and psychoanalysists who are practicing today. We are in an ethical dilemma in our own times. Religion has been rejected as a source of ethical truths and ethical values; nothing has risen to take its place, and many thoughtful people are interested in discovering some new source for ethics. For many centuries people have sought ethics originally in natural phenomena, then in science, then in psychology, and now in psychoanalysis. Unfortunately, many practicing psychoanalysts who have championed no consciously avowed system of ethics and who have found none that they can accept attempt to find one in classic psychoanalytic literature; however, there is none there for them to find, and the ethics that they do impute to it are, I fear, merely their own projections.

Gordon Pleune (*University of Rochester Medical School, Rochester, N. Y.*): Regarding Szasz's objection to considering sexual excitation and pleasure as having a location in a peripheral organ or zone, I certainly agree with his objection and think it more logical, if we are to think of excitation and pleasure

as having a location at all, to consider that the location is in the psychic apparatus or mind, which to most people utlimately means "brain."

Also regarding the objections to or defects in the libido theory, pleasure occurs, we understand, from relationship between so-called internal objects or psychic objects, and not only in relation to observable activity with external or so-called real objects. It seems to me that one must take into account the internal object relations or processes that are self-contained within the individual, within the psychic apparatus.

As for the separation of psychology from physiology, that is, the question of whether there can be a physiology of psychology or a physiology of minds, what objection or what reason is there not to have the concept that pleasure results from a certain configuration of electric pulsations or patterns of nerve networks in the brain? It seems, at least, that this concept is more in keeping with modern concepts of energy and with our knowledge of physics and chemistry than the sort of hydraulic dynamics of the libido theory. I freely grant that we cannot, at the moment, specifically define or measure the relationship between behavior and chemical or electric phenomena in the brain, but it still seems to me that there is valid reason to try to have the two areas related or synchronized as much as possible.

Szasz: In response to the comments of Ostow, I wish to say that he opens up a subject to which he has contributed a book, so that I know of his interest in this question. This is a large area. The relation of psychiatry to ethics is certainly a subject to which we could probably devote at least one entire monograph. I can say only that I do not think that the situation is as simple as he has stated it. I do think that it is legitimate to examine Freud's own ethical system, and I think that he has one. As everyone must, I consider his scientific *Weltanschauung* to constitute an ethical system. This is what I meant, and I cannot agree with Ostow when he says that Freud had no ethical system and that psychoanalysts and patients alike seek one in vain. The subject of science as an ethic is not a new one; it has been of some interest to philosophers of science for at least the last two decades. I believe that it is something from which psychoanalysis could profit.

In regard to Pleune's comment, I might note that among many others, at least one view of modern science is that each science is a special language and, in this view, mathematics, physics, geology, and psychoanalysis are all languages. If this is the case, it becomes highly problematical as to what is meant by speaking of pleasure as a configuration of electric impulses, because this is to speak a mixture of two languages. By pleasure do you mean what John Doe means when he tells you that he feels happy, or do you mean a certain configuration of electric impulses? I should think that as psychologists, insofar as we are psychologists, we have not nearly exhausted the idiom of psychology for definitions of pleasure, and I was only pleading, as did Mirsky earlier, for keeping the individual languages clear and uncorrupted.

Alfred H. Stanton (*The McLean Hospital and Harvard Medical School, Boston, Mass.*): I think the best way of summarizing this discussion is to say that we have made good use of Szasz's extremely penetrating criticism of

libido theory. I also think it is worthwhile to emphasize that these criticisms were of the theory and not of Freud. I say this not to save Freud or save Szasz, but to emphasize that this criticism of the theory has provided us with a number of points. I am certain myself that many of the items discussed here are not yet complete in the sense that perhaps they could be completed. I do not speak of the fact that the science is incomplete, but of the fact that there are unresolved problems remaining in the minds of many of the participating investigators.

An Attempt at the Systematic Restatement of the Libido Theory

II. PROPOSITIONS CONCERNING OBJECT CHOICES

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Introduction

The purpose of this paper is to present certain observations upon statements made about the relations between libidinal drives and the objects of these drives in an effort to identify what we can of the problems in further clarification of these statements and in the understanding of the human being that they signify. I shall not try to add new content to the theory except as clarification may contribute to reformulation. In order to keep within space limitations, I shall avoid consideration of the relation of libidinal drives with aggression or with other needs of the person, and I shall consider only a few of the problems. My intention is to arouse discussion rather than to summarize it.

I approach the subject matter, first, by a general consideration of problems in the clarification of characteristic psychoanalytic statements about drives and objects and their relation to statements in other systems of psychological formulation. From this I shall turn to a study of psychoanalytic statements regarding the development of the drives and of the early object and self representations. I shall then discuss problems regarding the later libidinal development as it manifests itself in the relation of the person or the child to other persons in groups such as the family or institutional groups. Throughout this presentation I shall occasionally call attention to what might be called the conceptual borderline between statements of psychoanalysis and those of other disciplines. This general purpose must be the justification for our restriction to the more widely accepted statements of the theory and our neglect of much important new work that bears upon the theory, the implications of which have not yet been fully developed.

Some Controversial Strategies in the Clarification of Psychological Terms

From the first, psychoanalytic statements regarding instinctual drives have included references to their source, aim, and object, the concept of impetus being added later. Considered together, these elements compose an act, often one requiring the complementary activity of another person, particularly in the case of sexual drives. The elementary picture, as presented by Rapaport, is one of an organism suffering progressively increased tension, the tension diminished by "discharge" in some form of action.[1, 2] This concept, while analogous to that of potential in physics and mathematics and suggestive of subjective conscious tension, as in states of moderate anxiety, should be differentiated clearly from these latter. Tension is only indirectly related to conscious states of anxiety or anticipation, and is a psychological concept developed by inference from psychological phenomena alone. While the

physical analogy may perhaps have suggested the psychological concept of tension, the psychological concept must stand on its own psychological explanatory merits, a statement that unfortunately must be reiterated frequently, since a naïve physicalism repeatedly creeps into psychological thought.

The relation of the drives to human acts, indicated by Freud's original description, is a significant one, since it indicates the close relationship of much of psychoanalytic theory to the intentionalist or "act" psychology of Franz Brentano, a relationship that may have arisen partly from Freud's long attendance at Brentano's seminars.[3] Brentano's point of view was generally, although only temporarily, eclipsed by the followers of Wilhelm Wundt among the academic psychologists. There has recently been a significant reawakening of "act" psychology, at least in derivative form, in several areas, many of them distinctly sympathetic to psychoanalytic psychology, as indicated by Parsons and Shils,[4] Grinker,[5] Dewey and Bentley,[6] Cantril,[7] and Geach,[8] among others.

This probably fictitious simple action must occur only rarely and only in earliest infancy, if then, because tendencies toward discharge meet with obstacles (certainly external and perhaps internal) from the very beginning, and one effect is that the drive may be separated from its previous object as, for instance, when an accessible object is substituted for an inaccessible one, and the action proceeds with little other difference in its apparent form. This "displacement" is commonplace in adult life and, in our theory, is one of the phenomena that lead to consideration of the drive as sharing certain properties with "substances" in a physics and a philosophy of science that are now out of favor. The drive continues in existence when separated from the object and, therefore, from the act of which it is a part; it remains active even though blocked, and may not lose intensity or may even seem to gain it—a phenomenon spoken of as "damming up," again with a physicalist metaphor assuming a customary sanction. Much psychoanalytic writing implies directly or indirectly that much of hydrostatics can be figuratively transferred to this new field, even though the likelihood that a drive may be destroyed under certain circumstances is assumed. It would be well to have this tacit assumption of the usual conservation of the drive and of its intensity insisted upon explicitly, since much psychoanalytic theory depends upon this assumption and since quantitative statements in psychoanalysis have been questioned in general. While it is true that quantitative statements unsupported by the ability to measure objectively are imprecise (and precision should not be claimed for them), rough-and-ready types of quantitation abound in the form of "more-or-less" statements. To speak of an impulse as stronger or weaker than an inhibition, or of desiring to do one thing more than another is to make statements that are far from meaningless.

Patients show evidence of such quantitation and of displacement, and apparent conservation of a drive in the psychoanalytic interview primarily by feeling and reporting the drive in such a way that, for all our skepticism and

searching for implications, we believe our patients. We identify disguised drives, in symptom, dream, or hallucination, most convincingly when a patient drops the disguise, perhaps as a result of much analysis, and tells us in his own terms by what he is moved. For example, a slip of speech made in anger when a patient says impulsively that he loves policemen when he was clearly intending to say he hated them will lead often enough to a disturbed thoughtful pause and the offering of much material amply consistent with the content of the slip. Evidence of this type underlies and supports our more uncertain constructions and hypotheses.

I emphasize this nature of the evidence because it marks a source of inadequate understanding between the analyst and other scholars who are not exposed daily to incidents of this type. This type of indication is discarded in quite wholesale fashion by our more radical operationalists; a recent speaker at the McLean Hospital opened his talk with the quite categorical statement that no one would be able to do anything with schizophrenia until it could be measured. In a recent critical essay, Abel[9] divided observations and technical operations in the behavioral sciences into two classes, one of which was the operation called *Verstehen* studied by Dilthey.[10] *Verstehen* is one type of understanding of a person, the understanding of what he says, as opposed to that type of understanding called in German *Begreifen*, the type that is applicable to electrons as well as to people. Abel's view is given most cogently in his summary:[9]

"The operation of *Verstehen* is performed by analysing a behavior situation in such a way—usually in terms of general 'feeling states'—that it parallels some personal experience of the interpreter.

"Primarily the operation of *Verstehen* does two things; it relieves us of a sense of apprehension in connection with behavior that is unfamiliar or unexpected and it is a source of 'hunches,' which help us in the formulation of hypotheses.

"The operation of *Verstehen* does not, however, add to our store of knowledge, because it consists of the application of knowledge, already validated by personal experience; nor does it serve as a means of verification. The probability of a connection can be ascertained only by means of objective, experimental and statistical tests."

Even if we overlook the fact that the development of hunches has always been generally recognized as an indispensable part of the scientific process, the implication is that all acquisition of new knowledge comes (and will come) through one particular type of scientific endeavor. Such an assumption seems to me to ignore history and to threaten the stultification of future workers to the extent that such views are taken uncritically as dogma.*

The reason for my emphasis is to be found partly in what I take to be the purpose of this monograph; namely, the promotion of the scientific development of psychoanalysis by establishing ties as close as possible to the scientific method as it appears in other pertinent disciplines. Operational definition

* In this connection, see the observation of Bertrand Russell on "animal inference."[11]

has deservedly come to have a high place among the techniques of resolution of difficulties in precise formulation and investigation. To emphasize the usefulness of operational definition is not, however, to imply that only operationally defined statements are meaningful. The psychoanalyst is still faced with the fact that the drives remain, as Freud termed them, our myths, and are not yet fully susceptible to operational analysis. Behavior, stimulus-response, perceptual, and defensive processes can be brought more closely to operational definition or statement. The instinctual drives remain hypothetical constructs (in the sense indicated by MacCorquodale and Meehl,[12]) with many more or less ambiguously implied characteristics, some of which, when isolated and clearly stated, seem to be unlikely in view of other information.

Many efforts at achieving greater clarity in instinct theory have failed, and will continue to fail, because, due to nonrecognition of the fallacies involved in reductionism of several types. Many of these errors can be so readily identified by those alerted to their nature that I should like to call attention to an exceptionally helpful analysis of reductionism by the distinguished logician Ernest Nagel, who states,[13] in discussing the relation of biology to physicochemical explanation: "... the two conditions which seem to be necessary and sufficient for such a reduction are briefly as follows. Let S-1 be some science or group of sciences such as physics and chemistry, hereafter to be called the "primary discipline," to which a second science, S-2, for example biology, is to be reduced. Then, first, every term which occurs in the statements of S-2 (*e.g.* terms like cell, mitosis, and heredity) must be either explicitly definable with the help of the vocabulary specific to the primary discipline (*e.g.*, with the help of expressions like length, electric charge, osmosis); or well-established empirical laws must be available with the help of which it is possible to state the sufficient conditions for the application of all expressions occurring in the explanatory principles of S-1. For example, it must be possible to state the truth conditions of a statement of the form 'x is a cell' by means of sentences constructed exclusively out of the vocabulary belonging to the physicochemical sciences. Though the label is not entirely appropriate, this first condition will be referred to as the condition of definability. (Second) Every statement in the secondary discipline, S-2, and especially those statements which formulate the laws established in S-2, must be derivable logically from some appropriate class of statements that can be established in the primary science, S-1. This second condition will be referred to as the condition of derivability. These conditions have not yet been satisfied; but nothing in the facts surveyed up to this point warrant the conclusion that biology is in principle irreducible to physicochemistry. Only further experimental and logical research can settle this point ...."

Psychoanalysts who have dealt with drive theory have tried in many cases to reduce the instinct or the theory to another set of scientific statements. Kaufman, in his presidential address,[14] insisted that psychoanalysis was a biological science; consistent with this, certain investigators have sought to reduce emotion or psychic structure to brain function in more or less specific terms. Freud postulated the erotic and death instincts on the basis of metab-

olism; recently Szasz, on the basis of considerations of entropy change showed how it is possible to postulate a life instinct.[16] It seems to me that, on the basis of knowledge such as that given by Nagel,[13] we are in a position to understand why such studies—I should perhaps say speculations—have been relatively unproductive as compared to other work by these authors. No matter how often and persuasively we insist upon the so-called biological basis of the drives (or, for that matter, of the ego) this insistence is of little import by itself. What is lacking is precisely what Nagel mentioned in his last sentence: further experimental and (perhaps) logical research. While in principle most of us would assume that brain function, and endocrine, metabolic, and other physiological factors enter into the existence of a libidinal wish, it should not be necessary to emphasize the fact that we are not yet in sight of the knowledge that would permit the translation of psychoanalytic language about the libido into physiological language; we simply do not possess many of the facts required. While this should make us all the more receptive to experimental reformulations of the libido theory, it by no means implies that in its present form the theory is of little or no value in the conduct of psychoanalytic and other investigations.

Just as unsatisfactory have been the efforts to reduce psychoanalytic phenomena to social interaction on the one hand, as attempted by Sullivan,[17] or to organism-environment interaction, as has been attempted by many stimulus-response, behaviorally oriented psychologists and by those who try to limit knowledge to items that have been defined operationally. Sullivan, in particular, offers in his work clear evidence of a potential gain in clarity and in potential operational analysis that has been achieved at the expense of almost systematically avoiding consideration of the phenomenology of neurotic and other psychiatric illness in terms of his theory. Hallucinations, dreams, and the contents of anxieties are bypassed. Great therapeutic subtlety and intuitive grasp of the experience of illness, derived from years of sensitive attention to patients and students, did not suffice to bring his descriptive writing into such contact with his theory that the latter served to explain the former. This, I suggest, is particularly likely to happen when reduction has been attempted before the knowledge is available to achieve the reduction statements successfully. However, the greatest danger is that the premature reductive statement is likely to be soporific, giving author and reader alike the comforting illusion that they know something that they do not know. I suspect that some process is involved whereby rigor of statement is inversely proportional to the amount of information achieved in a study. Gardner Murphy recently said,[18]

"It was [L. L.] Thurstone's tribute to Freud in 1923 to point out, in the heyday of American stimulus-response psychology, that a more comprehensive psychology had been attempted. I think Thurstone hit the nail on the head with such absolute accuracy that it remains only for us to reiterate the point a third of a century later."

What I have been trying to do is to state as carefully as I can and to analyze something that has been noted many times: the tendency to throw out the baby with the bath when greater rigor is sought in expression than is justified

by empirical knowledge. With its imperfections, the libido theory still provides the best available terminology with which to organize information about much clinical and other psychological material; however, this emphatically does not mean that it cannot be improved. While certain efforts at clarification are either premature or poorly considered, others are possible. Some parts of the theory are avoidably ambiguous. They permit either of two or more interpretations that are equally legitimate, and there is an ever-present temptation to slip from one interpretation to another whenever the validity of a statement is seriously questioned. Such ambiguity is not to be tolerated in scientific discourse after it is recognized; in contrast, vagueness is often an unavoidable characteristic of an accurate statement, since knowledge itself is actually often vague.

Basic Types of Object Choice: Self and Not-Self

To return to the concept of displacement of an instinctual drive, it is worth repeating that the concept implies the potential separation of the drive from the rest of the action, demanding our separate formulation of the drive, in the absence of better formulations. Furthermore, it implies the tendency of the drive to continue to exist when blocked which is a subjective commonplace, but nevertheless a concept of important implications. For instance, Fairbairn, in his recently offered theory of object relations,[19] bases it upon the conception that the libido is object-seeking, not pleasure-seeking, and second, that the conception that "whilst 'impulses' necessarily involve object relationships, they cannot be considered apart from ego structures, since it is only ego structures that can seek relationships with objects. 'Impulses' must accordingly be regarded as representing simply the dynamic aspect of ego-structures; and there consequently arises a necessity for the replacement of the old impulse-psychology by a new psychology of dynamic structure . . . ." If I understand this view correctly, the existence of displacement that implies the separateness or partial autonomy of the drive from its executive apparatus cannot be dealt with by Fairbairn's concept, and this impression is confirmed by its apparent absence from his recently published work.

However, exactly this process was the subject of an experimental study that related displacement to stimulus-response generalization in the animal with sophistication and caution by Neal Miller,[20] a study that illustrates the exciting insights that are probable when psychoanalytic concepts are brought critically into relation with concepts of other disciplines. Frequency or ease of displacement is the opposite of the concept of instinctual fixation; both are relative concepts and neither is to be identified with illness or health per se. Both are of special importance in dealing with the most difficult and controversial part of the theory of instincts: the concept of narcissism. Intrinsically complex and empirically difficult, the concept is of such central clinical and theoretical importance that it has been the subject of much consideration and has undergone very important recent clarifications.

Much of past difficulty, but not all of it, has been associated with serious ambiguities in almost every term of the definition of narcissism. The first of these is the term "object" itself. While instincts were originally described by

Freud as having objects, later general usage has tended to speak of object relations as opposed to narcissistic relations. In the original mythological image, Narcissus did have an object of his love: his own reflection and, by extension, his own body or his whole self. When any of these (the image of the self, the self, or parts of one's own body or mind) is the object of libidinal wishes, narcissism has been applied to the concept. Bodily illness or pain is likely to lead to increased libidinal interest in the body and to restrict cathexis of other objects, which is one basis for setting the narcissistic libido against object libido. This general phenomenon has been made the central psychopathological process in the psychoses. However, it is nevertheless so ambiguous that it has often been impossible to ascertain exactly what any particular person has intended to express when he used the concept.

Clarification has come about following the redefinition of the term by many authors; I shall discuss most fully the concepts developed by Federn, Hartmann, Jacobson, and Anna Freud, without being able to give particular credit to each author.

Federn developed the study of self-regard on the basis of his work with schizophrenics until it included many radically new concepts. His studies impress the student of schizophrenics with the perceptiveness and comprehensiveness of his acquaintance with the phenomena of the schizophrenic state. While some of Federn's theoretical concepts are less convincing, others are of considerable pertinence to us here. Federn believed that the "ego feeling," an inconspicuous but conscious or preconscious phenomenon, was important to distinguish in work with schizophrenics. This ego feeling was his name for the fact that certain items are felt, not merely intellectually recognized, as being within the "ego." These items felt within the ego vary from time to time and in the clarity with which the boundaries are sensed. It it possible phenomenologically to note that when this ego feeling is pleasantly and confidently toned, the margins are usually clear. In schizophrenics,[23] at times of severe narcissistic blows, and on going to sleep, the boundaries are unclear or disappear, either throughout their range (as in falling asleep) or at particular areas, as in dreams, in hallucinations and, in a more complicated way, in delusional projections. Federn felt these were narcissistic phenomena almost made visible. He emphasized that this ego feeling might include within its boundaries many objects from the outside world, and that different pictures exist side by side at varying levels of repression.

If we now skip many years we can improve Federn's formulation by following the redefinitions and cautions emphasized particularly by Hartmann and Jacobson. These phrases will require some definitions.

Action, as distinct from muscle movement, is coordinated, organized, goal-directed, and integrated; it may include, for our purposes, speech or the observable physiological phenomena of emotional discharge when these consciously or unconsciously serve the actor for communicative purposes. It is only through action that an instinct affects the outside world; an instinct, as it were, cannot get out of the person.

This implies that the term "object cathexis" should be more carefully worded as the cathexis of an image or representation of the object—a distinc-

tion properly insisted upon by Jacobson.[22] External objects (photographable objects) may be objects of action; the image (or psychic representation, a term that I shall use synonymously) of the outside work may be cathected.

This becomes especially pertinent when dealing with the self, as indicated by Hartmann:[23] " . . . in using the term narcissism, two different sets of opposites often seem to be fused into one. The one refers to the self (one's own person) in contradistinction to the object, the second to the ego (as a psychic system) in contradistinction to other substructures of personality. However, the opposite of object cathexis is not ego cathexis, but cathexis of one's own person, that is, self-cathexis; in speaking of self-cathexis we do not imply whether this cathexis is situated in the id, in the ego, or in the superego. This formulation takes into account that we actually do find "narcissism" in all three psychic systems; but in all of these cases there is opposition to (and reciprocity with) object cathexis. It therefore will be clarifying if we define narcissism as the libidinal cathexis not of the ego but of the self. (It might also be useful to apply the term selfrepresentation as opposed to object representation.) . . . These differences are obviously important for our insight into many aspects of structural psychology, and their consideration may help to clarify questions of cathexis and their topography. Is it the turning back of the libido from the objects upon the system ego which is the source of delusions of grandeur? Or is it not rather the turning back upon the self—a process of which the accumulation of libido in the (regressed) ego is only one aspect?"

This latter aspect of what has been called narcissism, namely, the accumulation of libido in the system ego or ego structure, Hartmann would prefer to call narcissistic ego cathexis.[23] Although I have not been able to convince myself that I understood the referent of this particular term, it is easy to agree that it is an entirely different process from that referred to above. I have some difficulty, for instance, in thinking about anything at all being "in" the system ego, but the concept of something being within the self-representation is commonplace.

Narcissism, defined by Hartmann[23] as "the libidinal cathexis of the self representation," is clearly the phenomenon that has been known as secondary narcissism. So also is Federn's[21] "ego feeling" (which perhaps now we should speak of as a "self feeling"), and its reported disappearance on the subject's going to sleep would represent the shift of cathexis from secondary narcissistic arrangements to primary ones.

It is not possible to set forth a fairly generally held view of the nature of primary narcissism in terms as clear as in the case of secondary narcissism. There are at least two reasons for this; first, the psychoses in which the phenomena are more prominent than in the psychoneuroses have been both less extensively studied by the psychoanalytic method and, when studied, the material is, perhaps, more obscure; second, the concept is inextricably mixed with the unsolved problems of the origins of the ego and of the self and object images.

The simplest general view is that the state of primary narcissism in the infant is that state antedating the development by the infant of the discrimina-

tion between the parts of his experience referable to the outside world and those referable to himself. This formulation is somewhat ambiguous, in that some authors speak of "outside of the body" and others speak of the body as being outside of the child's experience of its self; presumably both occur and the difference is primarily terminological. Freud's early view that the outside object is recognized as a result of the experience of failure to be satisfied either by crying or, by the hallucinatory wish-fulfillment that he postulated as the child's first response to failure of the outside world to satisfy him, is still the standard assumption. This early Freudian view, however, is now complicated by questions regarding the difference between hallucinations as they occur in infancy and the generally postulated later images of external objects; why should the special term "hallucinations" be used? While the obvious answer is that Freud emphasized the independence of the child's internal image from the actual external object, the term "hallucination" presupposes a distinction between the sensing of self and not-self. Since the representations of self and object arise from this distinction, these conceptions are difficult to differentiate from the postulated hallucinations of the earlier theory. Many authors speak of this state of primal narcissism as reaching its most representative form in the child's state of sleep; for most writers it is synonymous with the terms "autoerotism" as Freud originally used the term (differentiating it from primary narcissism by the fact that there was no ego, and that narcissism required such a mental structure to be cathected) and to the term "primary identification," a state of not distinguishing self from not-self. Jacobson[22] believes that schizophrenic patients may regress to this type of identification, which is another manifestation of primary narcissism.

Separation of object choice from the development of object representations is not easy in a genetic approach to description, since the two are thought to proceed so closely together. Those parts of the body (and of the body of the mother and of other care-taking personnel) that are the most closely connected with drive gratification become the first objects of the self and other images. The development of these images is slow, progressive, complicated and as yet inadequately known. Various authors have emphasized different important steps: the finding of the constancy of the mother (even when she does not continue to gratify or when satiation has been reached), the recognition and sensing of her wholeness instead of her separate gratifying parts, and the identification of the wholeness of the body of the child himself and of special areas of pleasure on its surface. Earlier emphasis upon the conflictual aspect of this learning has been supplemented by the assumption that much of this learning is the activity of an ego whose development is not solely the result of experience, but in part matures like other aspects of the person, and that many of its activities are autonomous. Two general and important assumptions are, first, that at later stages in life the object and self images may regress wholly or in part to this period, losing their distinction and, second, that the learning process is likely to be uneven, variable from child to child, and fulfilled only incompletely even in the healthiest child. An important stage in the recognition of objects independently of the child's wish comes with its learning about

the control of its feces and the problems that such control solves in connection with this particular pleasurable or painful experience of the relation to itself and the outside world, of the absence of control of the not-self, and of values attached to the inside of its body.

All authors emphasize the importance of the child's discovery, shortly before the edipal period, of the fact that its sensing of its own omnipotence was mistaken, the progressive later recognition of its parents' being neither omnipotent nor impotent, and the slow and incomplete learning of the fact of "partipotence," to use Silverberg's apt term.[25] All of these factors can be considered accurately as aspects of the painful abandonment of the self image as including the outside world, in that the outside world is sensed as being a part of, existing for, and magically responsive to one's wishes; these factors, are therefore generally thought of as residues of primary narcissism, that is, of an inadequate distinction between self representation and object representation.

This gradual, partial, and tragic twilight of the gods leaves behind its traces, as do other losses or separations from highly important persons; a part of the ego is altered to include structures similar to the infant's perceptions of the omnipotent parent image, the infant identifies with the parent, a process motivated by the wish to continue to take part in the feelings of omnipotence that have been lost but are felt to be so sorely needed from time to time. Another solution is a type of object relation of profound importance; the child comes to seek evidence of parental love and support and to a considerable extent subordinates his other impulses to this wish. By achieving this love, a partial re-experiencing of the old sense of connectedness or identity with the powerful rest of the world can be obtained. A third way of dealing with this separation has been suggested by Felix Deutsch in a study of conversion.[26] He suggests that the child reacts to this sense of loss by trying to undo it through fantasy. Feeling with Freud that the sense of reality originates from the projection of sensory perceptions of the own body onto objects outside of it, they are reunited with the body, in fantasy, by symbolization, the symbol thus containing elements of its own body perceptions within it. Returning to our special topic, however they may be formed, symbols (I am using the term as used in a special way by Freud and Jones) also become instinctual objects, perhaps combining in their form an unrealistic solution of the dissatisfaction of the separateness of self and not-self.

It will be recognized as a limitation of this paper that space does not permit the adequate consideration of alternative views held among analysts regarding the development of the self and object representations. I can only mention the significant differences found in the views of Klein and her associates,[27] who find much more highly organized self and object representations very early in life than is the usual view. The convincing note sounded by Hartmann[28] and by Rapaport[29] to the effect that some early ego type of activity is a necessary postulate to account for the delay in satisfaction and for the very existence of hallucination, to get the developmental process started, so to speak, poses other problems in the development outlined here. Finally, the relation between the object images as they develop and the actual external people or things that

actually are the objects is an old and complicated problem that has interested philosophers of many different schools.*

Before turning from the self as an object, it is necessary to note that the causes of the selection of the self as object or of regression to narcissism are only sketchily given in psychoanalytic theory and that we are still uninformed in areas where we should very much like to have enlightenment. For instance, the relation between physical illness or pain and increased secondary narcissism is well established, but its underlying reasons are not. Similarly, the reasons for the loss of object-representation cathexis in schizophrenia are unknown; while, clinically, separation or rebuff is occasionally associated with the narcissistic regression, the regression as a defense against increasing homosexual wishes is more typical. Opinion among analysts is still divided on the degree to which weight should be given in the onset of schizophrenia to situational or psychological factors; perhaps the majority of writers seem to assume some physiological process in analogy to falling asleep.

Choice of External Objects

If the course of events governing the choice of self or not-self as instinctual objects is outlined only very partially, the same thing is true regarding the course of events behind the choice of external objects.

Freud's early statement that loved persons are chosen either because of their value to the subject or because, in some way, they are sensed as like the subject or like the person he wishes he were, remains generally accepted. A person may tend toward love of the narcissistic type, either of himself, what he has been, what he would like to be, or what has been a part of him. On the other hand, he may select as the object of his love a person who either fed him like a mother or protected him like a father. The infant is universally drawn toward its mother for this latter reason, and boys find little reason for change. The girl, however, is redirected from her mother toward her father; this change has been accounted for classically by finding that the little girl, feeling deprived of a penis, holds her mother to blame. The relative weight to give to her other disappointments is not certain.

I shall not deal with the classically described changes in object and in nature of attraction that occur with the Oedipus situation and its resolution, except to mention that their course is influenced by the form of the family—both by the personalities of the parents, the presence of other children in the family, broken homes of one sort or another, or the cultural variations in type of family. This material has been gathered most conveniently by Otto Fenichel (p. 84).[32]

* While it has been considered exhaustively, it may well be that psychoanalytic or developmental research illuminated by psychoanalytic theory can make significant contributions; among these are the fascinating implications of the "transitional objects" described by Winnicott[30] that the child seems to use, along with the thumb in its mouth, as concrete aids in learning, at the same time controlling and denying the fact of the existence of the distinction between self and not-self. (During the preparation of this paper I was influenced by the analysis of these problems by J. H. Woodger.[31])

Instead I shall turn to my next topic; namely, the determination of object relations in groups, using the family as a topic that has been treated both from the viewpoint of the psychoanalyst and from that of the social scientist.

Object Choice in Later Life

For a number of reasons psychoanalytic theory is not highly articulate upon the problem of object choice in later life. While the early types of choice persist—the narcissistic ones, where the object is chosen on the basis of perceived similarity to the chooser either as he sees himself actually, ideally, or in the past, and the anaclitic ones whereby the object is chosen because he is reminiscent of a person who met his needs at an earlier time—their manifestation is complicated by the great development of ego factors, defenses, educational and cultural experiences, ego interests, aspirations, and group identifications to such an extent that regularities are not easily perceived by the psychoanalytic method. Primarily during the great upsurge of sexual interest at adolescence, the repetition of Oedipus anxieties and defenses can be discerned regularly, with the normal abandonment of the parents in favor of exogamic object choices; the identification with the parents who are being lost can be detected, and the displacement of interest to a beloved teacher is a common observation.

A new type of object choice appears during adolescence: the person who promises or offers full libidinal satisfaction. This is not a choice based on other needs, as in anaclitic choices but, partially at least, is based on direct genital satisfaction. This factor, which is the main drive away from the family, raises problems in the theory of object choice.

First, while the choices often will be made partially on the basis of either narcissistic or anaclitic factors, they always will include factors often dismissed as "reality factors" such as availability, appropriateness, shared expectations or values, complementary views about sex roles, social skills, accepted times, and ages and places for courtship. These are items that cannot be described adequately within the framework of any individual psychology, since all of them include within their definitions the concept either of social structure or of acculturated interpersonal relations between two or more persons. It is not practicable to give a review of even the outstanding types of investigation of such social phenomena that owe something to psychoanalytic instinct theory or of those that have reciprocally contributed to psychoanalysis; mention of a few, however, will illustrate the problems involved in outlining object relations phenomena within the relevant social sciences. For instance, the many empirical studies of the perception of people made by social psychologists and reviewed by Bruner and Tagiuri[33] are clearly giving material essential to an adequate grasp of object selection. The yield to psychoanalysis is more concisely illustrated by the description of "privatization" given by Kris and Leites.[34] This is a response that occurs in the projective distrustful citizen in which his private interests are given priority over public ones, a concept that adds significantly both to the theory of object relations and to political science.

The importance of the interactional characteristics of object choices in later life can be illustrated by some consideration of problems of conceptualizing loving relationships. Fenichel, among others, has indicated the serious problems in traditional formulations of the relation between libidinal attractions and love; these are illustrated by the fact that tenderness continues to exist during and after full libidinal satisfaction, perhaps particularly after full satisfaction when, if tenderness were simply an aim-inhibited libidinal drive, it would regularly disappear or be more conspicuous when sexual activity is blocked. Fenichel gave us an extraordinarily elegant definition of love: "One can speak of love only when consideration of the object goes so far that one's own satisfaction is impossible without satisfying the object too" (p. 84).[32] The very clarity of the definition raises the question about the ability to love if the partner is unable to have complete satisfaction. I should like to suggest an interactional formulation of loving relationships, modified, but derived from Fenichel: "A loving interaction is one in which the fullest satisfaction (sexual or otherwise) of either partner requires for its existence the knowledge of the satisfaction of the partner or partners." Such a definition includes in its structure the fact that the term "love" is certainly not often applicable to couples or groups where there is not fairly full mutuality. It is hard to clarify either the concept or its libidinal relations without including an interpersonal terminology.

The governing of object choices by group events is both obvious and relatively little explored. Freud's extraordinary demonstration of the value of the libido theory in analyzing group phenomena[35] has not been repeated in this particular field, although his analysis has been extended somewhat. He made use of the libido theory to account for the fact that panic occurred in institutionalized groups with the disappearance of the leader even when there had been no increase in danger. The simultaneous loss of the followers' common identifications with him and of their libidinal ties to him led to an accompanying dread of the same type as in patients, who lose their libidinal ties as they fall ill. Freud's use of the libido theory permitted him to account for phenomena that escaped explanation on the basis of William McDougall's "contagion."[36] Redl's categorizing of the types of emotional structure of groups has proved a lasting addition to Freud's description, promising further developments of this nature.[37]

Anna Freud's classic experiment in artificial families and her more recent study with Sophie Dann[38] of a group of long-orphaned refugees are further contributions to the analysis of the dependence of object choice upon group structure.

The therapeutically intended institution offers exceptional opportunities for the study of this relationship. For instance, Polansky *et al.*[39] at the Austen Riggs Center Inc., New York, N. Y., offer detailed analysis of the choices by patients of their clique companions and how change in the formal structure of the institution brought about change in the clique structure. There is, it seems, some ground for feeling that Romeos and Juliets can be encouraged by the provision of feuds between Montagues and Capulets.

These experiments indicate the way in which libidinal development or object choice is a function of the formal structure of the groups, and that they themselves comprise part of the informal structure. Clearly, a certain degree of structure and a certain type of it is favorable to certain types of libidinal object choice. The effects of the dissolution of structure have been indicated in a series of studies both of concentration camps, where regression is frequent (but not invariant) and in group disturbances, such as collective disturbances in mental hospitals.[40–43] In all of these there was clear primitive substitution for more complex and discriminating thought processes, evidence of libidinal regression and, in some cases, narcissistic withdrawal. In one report there was evidence of a fleeting restructuring of the whole group in a way resembling Darwin's and Freud's descriptions of the primal horde.

It seems likely that instinct theory will make its greatest impact in this area by its contribution to theoretical analysis directly within the social sciences. Prominent among these is the theory of social systems developed by Parsons and his co-workers.[44, 45] In the analysis of these investigators the "role," the most significant element of any social system, has as one of its major dimensions its cathexis, a radical addition to the primarily cognitive role theories of the past. *

The further conceptualization required by students in longitudinal studies, in perceptual experimental work, or in empirical social psychological or learning studies will, I believe, profit from the effort to include consideration of psychoanalytic drive theory and, in turn, I should expect such efforts to test and improve the valuable heuristic tool that the theory has proved itself to be. Persistent relating of such empirical work to the observations made in clinical psychoanalysis and the phenomena of illness on the one hand and the clarification and removal of ambiguity or of inconsistencies in the theory on the other will constitute a program that should safeguard against either the careless neglect of such matters as neurotic symptoms or childhood sexuality or the endless skillful but empty balancing of one dogmatic postulate against another.

Summary

To facilitate discussion and to summarize, I shall set forth without elaboration certain statements contained in this paper about the nature of object choices as stated in psychoanalytic theory:

(1) Libidinal drives may be manifested in action directed toward discharge with an objective object. They also may cathect object representations or self-representations if, for any reason action cannot occur.

(2) Self-representations may be either of the body, the mind, or of persons or things close to the subject; drive cathexis may be directed toward any one or all of these; for instance, images of one's own thoughts, as parts of the self image may be cathected; or another is the pleasure of playing with one's thoughts. These processes are collectively called secondary narcissism which, in a moderate degree, is a normal characteristic.

* A much fuller discussion of this type of problem is to be found in Scheidlinger, *Psychoanalysis and Group Behavior*.[46]

(3) The ego structure (the system ego) as defined by its functions, includes processes not necessarily obvious either in action, consciousness, or in the self-representation actuated by libidinal drives; secondary (or ego) identifications require libidinal drives in their construction.

(4) Libidinal drives are inferred as parts of more-or-less integrated acts directed toward the release of accumulated tension. However, they may occur (and usually do so) separately from any particular action aimed at any particular object, and from such phenomena the partial independence from other psychological phenomena may be assumed.

Displacement of libidinal drives from one object to another or to the image of an object occurs usually without great loss of intensity of the drive, and often with an apparent increase.

While libidinal drives are generally assumed to be manifestations of physiological and of interpersonal and social processes, current knowledge is inadequate to permit reduction of statements about drives to either of these other terms; current knowledge is only sufficient to permit recognition that these phenomena are all related in complex but highly significant ways.

(5) A state of primary narcissism, autoeroticism, or primary identification (used here synonymously) is assumed in the state of deep sleep and in satiated states of early infancy. In this state drives are assumed to be satisfied in some direct way without recognizable objects. There is no distinction between self and not-self, even though there may be inborn perceptual and action structures functioning as the system ego.

(6) Blocking of libidinal satisfactions contributes to learning the distinction between self and not-self, a lesson learned incompletely and leaving a continuing image or set of images of omniscience, omnipotence of either self, not-self, or both, or fusions of self and not-self.

The discomfort of the sense of loss of not-self is minimized by the creating of the self image in part on the basis of the perceptions of the parent (identification) and in part by the creation of symbols. Both of these become libidinal objects.

(7) Objects of libidinal drives may be chosen on a narcissistic basis (because they are like one's self image, one's ideal self in the past), or on an anaclitic basis, that is, someone who has met one's needs or someone similar to such a person. Particularly with maturity, persons are also chosen on the basis of their having met or their promising to meet direct libidinal needs for full genital satisfaction.

(8) Adequate theory of selection of objects requires full consideration of interpersonal and group aspects of the phenomena, such as availability, common fate, shared values, and cultural appropriateness. The relations between libidinal drive, loving relations, and tenderness are matters about which there is current uncertainty, partly owing to the complexities of these social factors.

(9) The loss or partial disorganization of group structure is accompanied by privatization, narcissistic withdrawal, or regression among the group members. Libidinal ties among the group members form an important part of the informal organization of groups.

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Discussion of the Paper

Martha Wolfenstein (*Graduate School of Psychology, College of the City of New York, New York, N. Y.*): Stanton has raised a number of interesting questions both of logic and of substance. I shall therefore consider only a few of the topics that he has discussed.

Stanton has spoken against what he calls "reductionism," that is, the attempt to translate libido theory into, for example, physiological terms. Szasz has taken a similar position in criticism of attempts to borrow scientific sanction from the more established sciences by such means as taking over their vocabularies. Stanton, having questioned the usefulness of "reductionism," concludes: "With its imperfections, the libido theory is still the best available terminology with which to organize information about much clinical and other psychological material." This, of course, does not imply that translation into terms of other disciplines exhausts the possibilities of reformulation of libido theory. In acknowledging, for instance, the ambiguity of much psychoanalytic terminology, Stanton allows for another possibility. This would be a clarification of psychoanalytic propositions where the only extra-analytic equipment would consist in certain rules of logic. So, for example, the distinction between definitions and propositions and that between observable and unobservable events may, I think, be usefully applied to the statements of libido theory.

In the discussion of Szasz's paper elsewhere in these pages various connections were suggested between a mass of propositions (not clearly explicated) constituting "libido theory" and other masses of propositions (likewise not clearly explicated) constituting "action theory," "field theory," or "learning theory."

In contrast to this macroscopic approach I should like to consider things microscopically, attending to particular terms and propositions in order to illustrate methods of clarification.

Distinction Between Definitions and Propositions

A *definition*, in the "empiricist" sense, is a statement of how a speaker or writer intends to use a given term. Such a statement of intention cannot be either true or false. A *proposition*, on the other hand, connects terms in such a way as to refer to some real state of affairs, and may therefore be true or false.

Applying this distinction to Freud's *Three Essays*[1] we may say that what Freud calls his "enlarging of the concept of sexuality" or " 'stretching' of the concept of sexuality" is in one sense a matter of definition. Freud begins by criticizing the conventional way of defining "sex" as genital and heterosexual. He has discovered a number of close similarities and interconnections between genital and certain other activities and between heterosexual, homosexual, fetishistic, and other behavior. For instance, he observes what goes on in an infant's thumb-sucking; there is a spontaneous excitability of the mucous membrane of the mouth which rouses the impulse toward further, external stimulation of this area. There follows mounting excitement accompanied by pleasure and admitting of a climactic release and then contentment and cessation of the activity. The same sequence occurs here as in genital activity. This is what is meant by calling the mouth an "erogenous" zone and thumb-sucking an "erotic" or "sexual" activity. However, the same relationship could have been stated while retaining the narrower definition of the term "sexual."

The same thing can be said of the many genetic and dynamic interrelations between genital and extragenital activities that Freud discovered. For instance, there are conditions under which the inclination to seek pleasure through stimulation of the mouth or anus appears to curtail the wish or the capacity for genital activity. This relationship can be stated equally well whether we extend the term "sex" to oral and anal activities or not. On the one hand we have to do with propositions about events occurring in the real world and, on the other hand, simply a change in the usage of a word.

There is no doubt, of course, that Freud's changed definition of "sex" carried a strong emotional impact, as for instance in his speaking of the "sexuality" of children, who until his time were considered "sexless." However, it was surely not for rhetorical purposes that Freud extended the use of the term "sex." When he spoke of "enlarging the concept of sexuality" he was alluding to the whole system of propositions connecting genital and nongenital activities. "The concept of sexuality," in this sense, is not merely a term that has been redefined, but rather an allusion to the whole body of propositions in which the term "sex" in its new definition occurs.

Distinction Between the Observable and the Unobservable

For example, take the familiar proposition, cited by Stanton, that there is an increase in narcissistic libido in the person who is physically ill. In the

usual meaning of "libido" it is not held that we observe the shift of libido referred to here, nor do we observe it in the many other instances when we speak so familiarly about the flow of libido back and forth from the self to other objects. What we do observe, in the case of the person who is physically ill is, for example, that he becomes more demanding and less considerate of others, he talks more about himself, and he takes less interest in what is going on in the world. Such changes are usually viewed as manifestations of shifting libido. However, we might alternatively define "increase in narcissistic libido" empirically in some such way as this: where a certain number of changes of this kind occur we shall speak of an "increase in narcissistic libido."

In the case of the physically ill we have a generalization from experience that is summed up concisely in speaking of the relation between illness and the increase in narcissistic libido. However, the use of the term libido seems to imply more than this. Partly, it gives us the illusion of having gone much deeper than an empirical generalization, of having grasped the underlying noumenal stratum beneath the phenomena we observe. This metaphysical appeal often has the effect of making actually observed events seem of inferior reality, mere epiphenomena or manifestations of an underlying unobservable but really real substance.

There is another, somewhat less metaphysical, appeal in stating an empirical generalization, such as that of the psychological changes in the physically ill, in terms of "libido." By so doing we evoke vaguely the wealth of other propositions in which the term libido occurs, and there is also frequently the illusion that all these propositions are interdependent, which is probably not the case for most of them.

I propose a definition of the word "concept," so often used in the interests of clarification while its own meaning is far from clear. A "concept," in the sense in which this word is often used, is a term with what one might call a large propositional aura; that is, a term that occurs in so many important propositions that its mere utterance seems illuminating. The very high degree of ambiguity of such "concepts" leads to their being retained so tenaciously. The simple employment of them seems to make us wise in an instant and is so much less laborious than the articulation of a system of propositions, and so much more gratifying to our aspiration to omniscience.

Emotional Obstacles to Rectifying Psychoanalytic Language.

In attempting to rectify psychoanalytic terminology and clarify psychoanalytic propositions, we should be aware of the emotional obstacles to our undertaking. We know something about word magic, the belief in the power certain words to give us mastery and control over reality, which makes it so difficult for us to deal with words in the impersonal, scientific manner that can be assumed with mathematical symbols. I should like to call attention briefly to some of the factors making for the overestimation of poorly defined technical terms in psychoanalytic discourse and for the difficulty in supplanting them or rectifying their usage.

Terms like "libido," "narcissism," "object cathexis," and a great many others

are usually acquired by analysts in training in a context that invests them with strong positive feelings in which love and respect are mingled. The student analyst aspires to learn and use the language of his teachers, his training analyst, his control analysts, the language of the admired psychoanalytic writers, above all Freud, whom he is required to study. The technical terms gradually acquire a familiar ring, a wealth of connotations, however imprecisely delimited, and the propositional aura to which I referred before. The hearing and utterance of such words induce a sentiment of comprehension and mastery.

There is also a great emotional value to technical terms in relation to case material. Every analyst is confronted with masses of material not all of which is at any given moment completely understood. The application of technical terms has a soothing and illuminating effect; a concise formula of terms that command respect and are rich in connotations is substituted for the inchoate, incompletely remembered, difficultly intelligible masses of case material, and things begin to seem more orderly, more under control. Naturally, one then remains strongly attached to the established technical vocabulary. To consider its possible inadequacies raises the danger of being deprived of it, and this in turn rouses anxiety. Without this vocabulary the analyst may feel that he would be plunged back into the unmanageable masses of his case material.

It is sometimes said that the longer analysts are in practice the more intolerant they become of having to listen to each other's cases. This is perhaps one reason why papers in which there is a minimum of empirical material are often greatly appreciated. To the tune of abstract terminology the analyst can enjoy an intellectual reverie about his own cases. There is a gratifying sentiment of mutual understanding and community of experience that probably often depends on the speaker's use of ambiguous terms that everyone can fill in according to his own experience and ideas. There is no check on whether speaker and hearers are in precise agreement about the meanings of the terms used. We are accustomed to assuming that such agreement exists, but I think of a recent discussion among experienced analysts and teachers of psychoanalysis in which it appeared that there was no agreement on the meaning of the term denial, for instance whether it referred to outer reality only or to inner reality as well.

There is a further point. There are probably few persons even among analysts who are entirely free from any vestige of latent opposition to psychoanalysis. Every analysis amply shows how painful it is to assimilate the truths about human nature that Freud discovered. It would be unusual for the feelings revealed in our own analyses to be isolated utterly from our attitude toward psychoanalytic propositions and terminology. Resistance would tend to make itself felt here as intellectual criticism or doubt. However, such doubts are likely to be fought down and replaced by the opposite, a tenacious holding to the terms of Freud's doctrines. Where any question is raised about even verbal rectification, anxiety may be aroused lest latent opposition of a more massive sort become manifest. Who knows where that might lead, in what heterodoxy one might end? Wasn't it a major point in Jung's deviation from Freud that he redefined "libido"?

Variables in Object Choice.

I now turn briefly to the substantive matter under discussion in this section: that is, "object choice." In the *Three Essays*[1] Freud distinguished two major variables in this connection. The first was the "sexual object," which he defined as "the person from whom sexual attraction proceeds," later (in the same work) extending this to include animals and fetishes. The second was the "sexual aim": "the act toward which the instinct tends." Freud pointed out that these are mutually independent variables. Thus he remarked that, contrary to a common belief of that time, the man who falls in love with another man does not necessarily assume a feminine or passive attitude. That is, the choice of a homosexual object may be combined with either active or passive aims. If we take the range of possible sexual objects and the range of possible sexual aims we find a large number of combinations in which they may occur.

I should like to call attention to two other variables frequently illustrated in the literature on object choice, but which have not been given standard designations. One of these variables is that of "role" or "roles." By this I mean, in the fantasy of the subject, what part is he assuming and what part does he assign to the object? For instance, a homosexual man may in fantasy be assuming the role that his mother played toward him in the past, while the young man he loves takes the place of his own past self. A woman may in fantasy cast her husband in the role of her father, her mother, or her childhood nurse. By "roles" I refer to the fantasies which thus characterize the relationship. The other variable that I wish to mention is that of the "goal," or what the person hopes to gain as a consequence of his sexual activity. In heterosexual intercourse, for instance, a woman may have the goal of acquiring a penis or of getting a baby. A certain kind of homosexual man may hope to gain from a superior man the big penis that he feels he lacks in order to be able to approach a woman.

Every object choice can be described in terms of these four variables: (1) the object, that is the person or other being in relation to whom sexual feeling is experienced; (2) the aim, that is, the act toward which the subject is impelled; (3) the roles, or the parts, that the subject assigns in fantasy to himself and the object; and (4) the goal, or end to be obtained. A catalogue of all the possible and all the actually observed combinations of these variables might be a useful preliminary to a systematic formulation of the genetic and dynamic factors operative in object choices.

Reference

1. Freud, S. 1905. Three Essays on the Theory of Sexuality. *In* Complete Psychological Works of Sigmund Freud. Standard ed. (1953). **7.** Hogarth Press. London, England.

Stanton: On the relation of social science to psychology: one can use the term social science so broadly or the term psychology so loosely that any line between them becomes purely artificial. I am not sure, however, that this

means that these terms lose their value. In other words, there are certain personal events that require for their existence at least one more member of the same species to exist. Even aside from one's past, which customarily we call social, there are certain other things that can occur in a single individual, even though everyone has a socialized history. For instance, we tend to think of dreams, at least as far as our emphasis on them is concerned, in terms of the individual, although it is possible to set up valid questions regarding, for example, the relationship of dreaming to expected interpersonal situations. It seems to me that the current tendency to speak of the psychological science as a behavioral, a social, or a biological science has a tendency to carry with it one of the things that we have discussed; namely, the question of the unobservable residue associated with our metaphysical history of what we mean when we speak of the mind.

Today it is more fashionable to speak about experience rather than of the mind, and some times these words are synonymous, sometimes not. This unobservable residue that you mention is a nonempirical component.

I did not really intend to speak against reductionism since, as I mentioned, the reduction of the synthesis of urea from organic chemistry to inorganic chemistry and other such events were major scientific achievements. What I had hoped to do was to speak against such reduction which lacked sufficient evidence to justify it.

SZASZ: Since I am responsible for this question of reductionism, I now return to it, particularly with reference to the difference between libidinal interest and just plain interest. First, however, I emphatically wish to defend myself against the answer just given by Stanton, who has assumed that the task before us is one of clarification and, instead of having a large category of interest, would restrict us to sexual interest. When he also mentions aggression, Stanton implies that an interest may be called erotic or perhaps nonerotic. This brings us to the point that libidinal interest has been contrasted with aggressive interest. Psychoanalysis has left no place for something that strikes me as being of great logical and phenomenological interest in this problem; namely, that the opposite of interest is disinterest. Disinterest there has almost no place in libido theory because it is based on the physical analogy of substance. You can have substance that is heavy or light, black or white, but you cannot logically have *unsubstantial* substance. Therefore, in psychoanalysis the principal terms in which we have explained lack of interest have been those of denial and repression.

One of the things that we do as psychoanalysts is to convert observable conscious interest into directly unobservable theoretical unconscious interest; that is, the subject may claim conscious interest in the stock market, and we may conclude that this is really some other kind of interest. Actually, this would be a correlation, it strikes me, between another category of events and thus, to some extent, a theory. It may be a theory shared by theoreticians, but it strikes me as a different category of events from the consciously experienced feeling state in libation. This, it seems to me, constitutes the concept that I wished to offer; namely, that of conscious or unconscious interest.

BELLAK: I desire to lower the discussion level a bit. What we are in danger

of doing is discussing the methodology of methodology, the science of science, instead of the methodological problems of psychoanalytical concepts. I could go back to what I said in the previous discussion; that is, stating my preference for the magnifying-glass approach, that is, not going too far from the clinical and observable level in trying to see what can be done about the theory and concepts related to the observable phenomenon.

For instance, one could examine what are the psychoanalytic propositions concerning object choices. Then, after enumerating them, one could either be interested in validating them (which does not concern us here) or could examine the logical nature of the statements concerning the propositions concerning the object choices.

One could discuss, for example, the implication of the developmental sequences in making object choices. For that matter, one could try to redefine cathexis in object choice in any number of ways, such as substituting the "hedonic tones" of different objects. Incidentally, one could probably rank these tones in order and arrive at some meaningful statements. The question that Szasz has raised about the difference between libidinal interest and plain interest is a very simple one: libidinal interest is part of a total theory with a number of allied propositions; namely, the energetic propositions: when one has a large libidinal investment in one object for example, one withdraws the cathexis from some other object. Another difference is, of course, that all the genetic propositions of psychoanalysis are part of any statement concerning libidinal cathexes.

OSTOW: I agree with Wolfenstein that if, each time we make an observation, we introduce a new term and a new proposition we do not produce a science or a scientific method, but a set of *ad hoc* hypotheses, and we have accomplished nothing. If, on the other hand, by the introduction of a new term or a new concept we are able to relate a number of different observations, then we are no longer dealing with *ad hoc* hypotheses, but we are acquiring new knowledge. Even if a word has a euphonious sound and we enjoy saying it, it may still have value in organizing the information in our minds.

For example, to take the question that Szasz has raised about the value of the word libido. What have we accomplished by using "libido" instead of "interest"? It seems to me that we have accomplished three things.

First, we have related to the striving for genital contact with the object, strivings for nongenital contact, strivings for noncontact relations, and even intransitive activities such as thinking. The first thing that the use of the word libido has done is to relate these types of activities to each other and to indicate that in our clinical observations one of these may substitute for another.

The second thing that the word libido accomplishes is that it distinguishes strivings for erotic union from strivings for destruction, as Stanton has already mentioned.

Finally, the third thing has not been mentioned, that what the use of the word libido accomplishes is to relate striving or craving or interest to the phenomena of illness. For example, Freud attempted to explain anxiety as a result of a sudden and abrupt increase in libido. On the other hand, in de-

pression we see a deprivation of the ego of its libido. These are uses of the term libido that could not be accomplished by means of the word interest, and it seems to me it unifies material from several different sources. Leites, in a previous discussion, mentioned that it is indifferent to him what kind of word one could use to describe interest in the stock market. This is a matter of practical importance to the thinking, practicing psychoanalyst, because when my patient, who happens to be a compulsive neurotic, trades on the stock market, his trading activities are highly eroticized, and this constitutes illness; but if I know that his trading activites are eroticized and represent operations of libido, then I must ask myself what kind of interest would he have if it were not libidinized? What could I call it? How does it fit into my theory? There must be a gap in my theory if I can do nothing with this particular type of information.

SANFORD: I also have had the impulse to say some things in support of what I perceive to be Stanton's purpose, and I am quite pleased that some of them have just been said. I also call attention to what I think is a controversy, if that is not too strong a word, between Szasz and Stanton concerning method. During the discussion of Szasz's paper, I intended to remark that psychoanalysis was to be defined by its method. True, Szasz called for an important distinction between its methods and its concepts, but it was on the basis of its method that he excluded a great deal of the libido theory.

If I understand Stanton correctly, he wants to test psychoanalytic propositions by methods that are not characteristically psychoanalytic. He cites studies from social perception, and he cites Neal Miller's experimental study of displacement, which is a study on animals, as I recall.[1] In short, he proposed bringing to bear upon psychoanalytic propositions the whole armamentarium of methodology in psychology and in social science. It is this interest, I think, that leads him to bring up the question about operations or operational definitions of concepts, psychoanalytic and otherwise. I think it supports this proposal to remark that operationism is no longer what it was. That is to say, in 1930, when E. G. Boring and Stevens were riding high at Harvard University in the shadow of P. W. Bridgman, when operationism had just been introduced, those of us who were interested in personality, psychoanalysis, and things of that kind were practically tongue-tied because we could not define any of our terms in a way that would be pleasing to the operationists.

Nevertheless, we went on talking because we found it necessary to get on with what we were interested in doing. Since then, operationism has mellowed a great deal, so that the really sophisticated philosopher of science will tell you that, if a concept is to be useful in science, it need not be defined in terms of the operations used to measure it, and it certainly need not be observable; it needs only to be related by some kind of theoretical construction to something that is observable.

What we find among theorists and workers in psychology (I note that we all also observe it among psychoanalysts) are differences in the width of the gap that the worker can tolerate between the observable and the purely conceptual.

Wolfenstein's example of the generalization about narcissism on the basis

of the patient's talk or attention to himself would involve a minimal gap between the observable and the generalization-making propositions concerning concepts, whereas the instance of the other patient seems to me to involve quite a gap between what is observed (in this case some sort of preoccupation with the stock market) and the inference that this has something to do with an anal fixation; obviously among psychologists there is quite a gap in the degree to which they are receptive to these two kinds of generalization. The resistance to the idea, for example, that social behavior at the level of stock market operations has something to do with a history of fixations having to do with the anus is quite difficult for a psychologist to accept, but the usefulness of that concept is precisely, as Ostow has said, that it provides a concept of a structure in the personality to which one can refer diverse manifestations in behavior and, if one has some validity for a first reference of something to this structure, then one can use it as a basis for predicting behavior in various other spheres. This, I suggest, is precisely the purpose of a theory in psychological science. I have indicated in a previous discussion that the libido theory happens to have served us so well because it performs precisely this function.

I am sorry that we have bridled somewhat at the mention of reductionism, because I am still uncertain as to what the word means and as to just what is being recommended here by participants in this discussion, and I should like to make just one more remark about it. If we are not reductionistic, then what are we? What is the opposite of reductionism? I am stressing methodology, and I should say that, if we are reductionistic, then most essentially we are holistic or organistic, and that this is the major trend in psychological science today. The examples that Stanton gave us indicate that trend.

Let us say that we are considering something like a drive. The advocates of stimulus-response psychology want to reduce the drive. That is, if we conceive of drive as the whole sequence of events (involving the beginning situation, the end situation, and the original act, all considered as one system) they want to reduce all of this to stimulus-response elements. Our answer, of course, is that we can have laws concerning drives in their relations to other events without having to reduce them to stimulus-response terms.

However, I do not believe that one would deny that it would be all to the good if analysis of behavior in stimulus-response terms increased our understanding of it. Consequently, I think that the question we should always address to the reductionist is: What does this add to our understanding of that which is reduced in order to explain it? If to do this is to be a reductionist there is also something else we can be, and that is organismic. I do not believe there is anything very mystical in what is suggested by the term emergent evolution: it is a matter of what are the conditions under which we can best observe a given phenomenon. This proposition would be that there are certain things about people that you cannot observe unless you see them in social group situations. I believe that this is Stanton's point. This would be the holistic orientation. We explain group behavior sometimes by reducing the phenomena to individual psychology, but it is perfectly obvious that some things about individual psychology that we want to understand do not become observable until we see them in the larger context of the group, and I suggest that it is basic to all

modern theory of personality that anything about personality that is observable in such a performance as perception cannot be entirely understood according to how perception is defined; it must be understood on the basis of how the perception of a given individual depends upon his functioning as a person, so that I think we must have a readiness to go back and forth between a reductionist type of explanation and a holistic type of explanation of the more elemental things.

Reference

1. Miller, N. E. 1948. Theory and experiment relating psychoanalytic displacement to stimulus-response generalization. J. Abnormal Social Psychol. **43:** 155–178.

Mirsky: I did not mean to bridle completely, but I do think that we should restrict ourselves to the subject of the paper; namely, object choice. I should be very happy to participate in what I remember as the old, old battle between reductionism and the concept of emergent evolution. Today the reductionists talk in terms of the biochemical and physiological systems involved, but I personally believe that this will never aid us. What is forgotten is that processes are never observable. Processes are inferences derived from observables. I have yet to see the enzyme hexokinase, but I have no doubt that it exists. I know that it exists because, by definition, glucose cannot be utilized if hexokinase does not exist. I know of no one who has ever seen it or observed it by any method; however, its existence has been inferred beyond doubt.

I shall try to illustrate the fact that in this whole discussion we are dealing with a process. We assume certain forces behind this process, and such assumptions are permissible as long as we can relate them to observables. However, I am not sure that we can do so.

Stanton: One more observation: as a psychologist, nothing could please me more than this emphasis upon explanation in psychological terms rather than on this need to reduce everything to physiological terms. The essential point seems to be (and I think this is well expressed throughout my paper) is that one feels that one has a pretty good explanation if one can use it to predict behavior. This is exactly what psychologists are always trying to do; the kind of behavior that they are trying to predict can just as well be everyday social behavior, manner of perceiving, or anything of the kind, and no one feels the necessity somehow to translate such behavior into physiological terms or to seek its explanation at that level. I suppose one reason why this has loomed so large in these discussions, as it does in psychoanalysis generally, is what Szasz indicated in his presentation: namely, the medical training of Freud and of so many psychoanalysts, and the related fact that medically trained analysts and psychiatrists do not do very much psychological research outside of the purely psychoanalytic area.

Mirsky: Thus far this panel has exhibited what has been defined as primary narcissism. I think we had better change the object of the panel and ask for some discussion from the floor.

Speaker from the Floor: I especially noted a number of comments that

were made by several speakers. Szasz mentioned the difference between public and private knowledge, and Stanton pointed out the difference between *Verstehen* or understanding and experimental work. Wolfenstein mentioned the distinction between observations in the clinical situation and theoretical explanations that we may offer.

I had the impression that psychoanalysis tends to be primarily a private kind of situation, an "understanding" kind of situation, and that there is relatively little or, perhaps, no experimentation and no contribution to expanding this system; that is, no self-correction, if I understand Wolfenstein's concept correctly. If it is thus true that different psychoanalysts facing the same problem offer different explanations of it, on what basis and by what criteria can we distinguish between one theoretical formulation and another? How can a group of psychiatrists go through a discussion such as this and actually emerge from it with a concept that may be considered somewhat better, somewhat closer to the truth, more adequate, than the concepts previously held by the participants? How can psychoanalysts develop an expanding, self-correcting system?

STANTON: In a sense, this is the crucial question and, to a greater or less extent, we have been addressing ourselves to it. To try to offer a complete answer to it would be grandiose, and my narcissism is insufficient for me to make the attempt at the moment.

However, I think that in the first place it is probably proper to say that there are ways in which psychoanalysis at least undergoes change on the basis of its internal structure; that is, that psychoanalysis is in itself a method of research. Whether the over-all situation is improving is something that I presume one could question, but there is a fair degree of general agreement that there are now theories that are more satisfying than the earlier ones. The whole recent development of ego psychology and particularly the development of central interest in the concept of identity are quite new and widely hailed concepts in psychoanalysis, or changes in formulation that spring largely from within the practice of psychoanalysis. It is my assumption, however, and I assume that it is also that of most of us, that psychoanalysis, its expansion, and its correction can be aided by other types of investigation. The very nature of this monograph and of the conference on which it is based illustrates this continuing endeavor to clarify, to uncover contradictions and, perhaps, to bring many of our concepts closer to empirical tests of one sort or another.

OSTOW: I think it is misleading for those who have no experience with psychoanalysis to listen to a discussion such as this, because perhaps they might get the impression that there is no agreement among psychoanalysts. This is not true. The fact is that, if they are confronted with a number of fairly classic situations, almost all well-trained psychoanalysts give them the same evaluation. It is our aim here not merely to reiterate what we already know and what can easily be confirmed, but to explore the areas of controversy and differences. Consequently, if we talk at great length about controversies and differences, it is not because that is all there is to discuss. There is much more that we have not touched upon, that we are not considering, that does not warrant discussion. We are discussing what needs discussion.

However, I should like to return to the question of reductionism and also to a question that Szasz raised in his presentation. We have discussed the question of reductionism to physics and chemistry, while Szasz discussed reductionism to biology. I think there is an important difference between Freud's interest in biology on the one hand and the attempt to reduce to physics and chemistry on the other.

Freud's interest in biology was not an effort to validate his hypotheses; it arose from the following implicit assumption, which lies behind every one of Freud's subsequent hypotheses; namely, that the psyche is an instrument whose only purpose is the achievement of the biological and instinctual aims of the individual and, therefore, that we can understand psychology only as an instrument of biology. Consequently psychology must, in an alternative sense, be tied to biology without necessarily being correlated with it step for step. That is why we find so much biology in Freud's writing. It is not an attempt to reduce; it is an attempt to see the role of the psyche in the total biology of the individual.

Szasz: I should like to react briefly. My impression, in addition to what Stanton said, is this: it seems to me that it has been assumed that I think that the nature of the data with which psychoanalysis deals is, in principle, not different from the nature of the data with which other empirical sciences deal. On the contrary, I think it is possible (and I rather favor the idea) that there are some interesting differences, in that the data are in some sense private. If we assume this, then psychoanalysis and the scientific method of psychoanalysis together constitute a particular method by which private data—the best example of which is a dream—are transmuted into public data: first, by the patient who shares them with his analyst and, second, by the analyst if he reports his observations objectively, scientifically, and constructively. In this sense the psychoanalytic method becomes a rather peculiar and unique method of transmuting private data into public data. I think that the nature of the observational material in psychoanalysis is somewhat different from that of the other sciences, and that this does not receive as much attention as it deserves.

An Attempt at the Systematic Restatement of the Libido Theory

III. PROPOSITIONS CONCERNING ENERGETIC-ECONOMIC ASPECTS OF LIBIDO THEORY: CONCEPTUAL MODELS OF PSYCHIC ENERGY AND STRUCTURE IN PSYCHOANALYSIS

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Conceptual models and analogies form the framework upon which many scientific theories rest and from which they develop.[1, 2] One method of evaluating the concepts of psychic energy and structure that underlie libido theory is by examining the models and analogies that Freud utilized in the course of the development of psychoanalysis as a theoretical structure in order to give coherence and relevance to his observations. This approach may enable us to obtain a clearer picture of the conceptual changes that occurred. Also, it may possibly cast some new (or at least different) light upon certain aspects of psychoanalytic theory.

Models are fruitful devices that carry with them inherent dangers. They may clarify certain problems, but may create difficulties in unexpected directions. In the course of the development of psychoanalysis Freud used three different sets of models to portray his theoretical concepts of the nature of the psychic apparatus. The earliest model came to light only recently following discovery of the Fliess letters and publication of the *Project for a Scientific Psychology*.[3] In this work, Freud postulates a neuronal structural model. Psychic energy, he writes, is "a quantity subject to the general laws of motion." The neurons were charged with "quantities in a condition of flow." From the point of view with which we are particularly concerned, the importance of this theory lies in the fact that it represented an open biological system. Rapaport[4] summarizes this theory in one of his lectures as follows:

"Freud's first theory of neuroses—in the 1890's—pivoted around trauma, reality, ego, social morality, defenses, and undischarged affect. The trauma was assumed to be an actual reality event that the ego found incompatible with its own and its society's norms. Therefore, the ego defended itself against the memory of the trauma, thereby bottling up the attendant 'affect,' which then found its expression in neurotic symptoms. If this theory could have been sustained, the doors to the exploration of the ego's relation to reality, of the ego's norms, of their relation to social norms, and of the ego's defensive activities, would have been wide open. The theory collapsed, however, under the impact of the discovery that the seduction-trauma was—as a rule—not a reality, but a fantasy."

In this theory, Frued utilized models stemming from the physics and physiology of his time. Of particular interest to us in his conceptualization of psychic energy in terms of a fluid current. This he expressly states as follows:[5]

"I should like finally to dwell for a moment on the hypothesis which I have made use of in the exposition of the defense neuroses. I mean the conception that among the psychic functions there is something which should be dif-

ferentiated (an amount of affect, a sum of excitation), something having all the attributes of a quantity—although we possess no means of measuring it—a something which is capable of increase, decrease, displacement and discharge, and which extends itself over the memory-traces of an idea like an electric charge over the surface of the body. We can apply this hypothesis, which by the way already underlies our theory of 'abreaction,' in the same sense as the physicist employs the conception of a fluid electric current. For the present it is justified by its utility in correlating and explaining diverse psychical conditions."

The effect of Freud's discovery that the psychic traumata reported by his patients were not "real," that is, that they had not actually occurred but were products of the patients' fantasies, was a profound one. As discussed elsewhere,[6] it represents the beginning of psychoanalysis proper. However, the effect of this event upon Freud's concept of the psychic apparatus has not been fully appreciated. With the recognition of the significance of psychic reality, Freud also changed his model of the psychic apparatus to one which consisted of an essentially closed system. He presents this model in Chapter VII of *The Interpretation of Dreams*.[7] Here, psychic structure is formulated in terms of spatial systems and temporal sequences. The ego becomes a poorly delineated shadow represented chiefly in the form of the censorship.[8] Its relation to reality is equally shadowy and vague. The focus in this model is upon the topographic relationships between the systems "unconscious" (Ucs) and "preconscious" (Pcs). Freud uses the analogy of the compound microscope, which forms virtual images as well as real ones. He states:[9]

"I shall remain upon psychological ground and I propose simply to follow the suggestion that we should picture the instrument which carries out our mental functions as resembling a compound microscope or a photographic apparatus or something of that kind. On that basis psychical locality will correspond to a point inside the apparatus at which one of the preliminary stages of an image comes into being. In the microscope and telescope, as we know, these occur in part at ideal points, regions in which no tangible component of the apparatus is situated. I see no necessity to apologize for the imperfections of this or of any similar imagery. Analogies of this kind are only intended to assist us in our attempts to make the complications of mental functioning intelligible by dissecting the function and assigning its different constituents to different component parts of the apparatus."

Freud abandons here the neuron model of his first theory and uses a visual analogy instead. He then proceeds to develop his concepts of the various psychic systems arranged spatially as[9] "the various systems of lenses in a telescope are arranged behind one another" (page 537). He also describes a temporal sequence in psychic activity, starting from an internal or external stimulus and proceeding through sensory systems to the motor system and discharge. However, he states,[9] "Reflex processes remain the model of every psychic function" (page 538).

Freud then develops his concept of the memory trace as a structural unit that is centered in the system Ucs and proceeds toward his concept of the censorship lying between the systems Ucs and Pcs. Essentially, he preserves

the concept of psychic energy as that of a fluid electric current and describes the flow and distribution of this current through the psychic systems. This has been called the "hydraulic model."[2] We see this most graphically in relation to the terms Freud used to describe the ebb and flow and the distribution of energy. It becomes "dammed up," it regresses "to earlier channels." Its "flow" or "current" may be diverted in different directions. These and similar terms portray energy in a fluid state in a closed system.

It was on the basis of this model that Freud developed many of his concepts of the changes in energy distributions and of their dynamic and topographic relationships. The dynamic concepts relate to the forces that flow within the psychic apparatus through various channels toward discharge or come up against various barriers by which they are diverted into alternative channels. The main barrier is the censorship that induces repression, namely, exclusion from consciousness. The topographic relationships deal with the spatial locations in the psychic (psi) systems; that is, their location in the Ucs or Pcs. It should be noted that there is, as yet, no specific mention of "drives" or "libido," although there are "internal stimuli."

However, as mentioned above, these changes were all conceived as occurring in an essentially closed system, namely, one that is isolated from its environment. This is a model that is extensively used in classic physics. It stems from, and gave rise to, an essentially mechanistic, strictly deterministic scientific attitude. We know that this closed-system model was extremely fruitful in the physical sciences up to a certain point, but reached its limit of conceptual usefulness in the first decade of this century. In physics and chemistry, experiments may be performed under highly specific, well-isolated conditions with very high control of the variables. This leads to great accuracy, repeatability, and predictability of the experiment.* Out of observations and experiments of this type, many of the laws of classical physics arose, particularly the laws of thermodynamics which relate only to closed systems. The second law of thermodynamics, that is, the law of entropy, will concern us particularly somewhat later because of its specific relation to, and effect upon, psychoanalytic theory.

In contrast to this, an open system is one that is not isolated from its environment, but that maintains itself by continuous intake and output. All living organisms are essentially open systems. They are not "in a state of chemical and thermodynamic equilibrium but are maintained in a so-called steady state which is distant from the latter."[10]

* Physical scientists were aware, of course, of the fact that a closed system was an ideal, and that no actual system or experiment was completely isolated. However, this was the theoretical goal toward which they strove. As such, it had great implications in regard to the philosophy of science, the implicit assumption being that, if and when we can isolate and control the variables completely, we shall be able to "know" all there is to know about the object under investigation. In contrast, in modern science there is no less use of the closed system in terms of actual experimentation, but there is conscious recognition of the fact that this is not the whole picture. Recognition of this is embodied in Werner Heisenberg's indeterminacy principle. In other words, the object investigated in isolation gives us an incomplete picture. It must be supplemented by that of its interrelationships. This leads to very different implications for the philosophy of science.

Closed systems are strictly determined in the sense that if any of the initial conditions or any part of the processes are altered, the end result will also be altered. There is thus a one-to-one relationship between cause and effect in the closed system. This strict mechanistic determinism, if carried over into the biological sciences, can lead to great methodological problems. This is one of the dangerous side effects of the closed-system model from which so many of our dynamic concepts are derived. Although we constantly warn ourselves against being seduced into such oversimplification, we must be on guard against this mechanistic determinism (perhaps the seductive quality of the analysis of parapraxes lies in the fact that they often gratify our need for such simple mechanical cause-effect relations).

Open systems, in contrast, operate on the principle of equifinality; namely, "that the same final state may be reached from different initial conditions and in different ways."[10] In addition, open systems contain feedback or control mechanisms that maintain the organism in its characteristic steady state. Furthermore, organisms have some type of "purposiveness" that is not present in closed physical systems.

Von Bertalanffy[10] states this somewhat dramatically in the following paragraph:

"Another point I would like to make is the change the scientific world-picture has undergone in the past few decades. In the world view called mechanistic, born of classical physics of the 19th century, the aimless play of the atoms, governed by the inexorable laws of mechanical causality, produced all phenomena in the world, inanimate, living and mental. No room was left for any directiveness, order, or *telos*. The world of the organisms appeared a mere product of chance, accumulated by the senseless play of mutation at random and selection; the mental world as a curious and rather inconsequential epiphenomenon of material events . . . . Now we may state as characteristic of modern science that this scheme of isolable units acting in one-way causality has proved to be insufficient."

Following the discoveries in psychoanalysis during the ten years after the publication of *The Interpretation of Dreams*[9] in 1900 Freud became increasingly aware of the limitations of his theory as it had been developed up to that time. These limitations stemmed basically from the closed-system model and the fluid-current or hydraulic concept of psychic energy. This, I believe, was part of the reason for the theoretical stocktaking and synthesis in the metapsychological papers that eventually led to a fundamental revision of psychoanalytic theory and a basic change of model.

Significantly, this series of fundamental theoretical papers was introduced in 1911 by the paper on *Formulations Regarding the Two Principles in Mental Functioning*.[11] In this paper the reality principle is clearly and sharply formulated.

It is worthy of note that in the same decade great changes were occurring in the physical sciences. Freud was fully aware of this. For example, in his paper *On Narcissism*,[12] in discussing the role of theoretical and speculative concepts in science, he states:

"The same thing is happening in our day in the science of physics, the fundamental notions of which as regards matter, centres of force, attraction, etc., are scarcely less debatable than the corresponding ideas in psycho-analysis."

While in *Instincts and Their Vicissitudes*[8] in relation to the same subject he reiterates the same point:

"It is only after more searching investigation of the field in question that we are able to formulate with increased clarity the scientific concepts underlying it, and progressively so to modify these concepts that they become widely applicable and at the same time consistent logically. Then, indeed, it may be time to immure them in definitions. The progress of science, however, demands a certain elasticity even in these definitions. The science of physics furnishes an excellent illustration of the way in which even those 'basal concepts' that are firmly established in the form of definitions are constantly being altered in their content."

I maintain that just as Freud had used the physical models of an earlier time as analogies for his model of the psychic apparatus, so he now began to reconsider the usefulness and validity of these models in relation to the changes occurring in the science of physics. His use of the closed-system hydraulic model is obviously related to the physical models of his time. It would be most interesting, but unfortunately would take us too far afield, to relate this closed-system model also to the philosophical concept embodied in the metaphysical "monad" of Gottfried Leibnitz. The concept of the "monad" as an isolated, independent psychical unit still exercised a great influence upon the philosophical thought of Freud's time.

Throughout the metapsychological papers one can see evidence of Freud's struggle toward a revision of his closed-system model, both in his attempt to clarify what was already known, as well as in sharpening his awareness of what was not known. The limitations of the closed-system model became more and more apparent.

However, it was not until 1923 in *The Ego and the Id*[13] that Freud actually reformulated his model into an open system. In this work the ego reappeared as part of the structure of the psychic apparatus, losing its purely descriptive quality and acquiring a dynamic function. Rapaport[4, 14, 15] has repeatedly made this point in several lectures and talks given on various occasions. In these he has detailed, in his usual meticulous fashion, the various relevant quotations to substantiate this point. However, he does not discuss this in detail from the point of view presented here.

In its first appearance as a dynamic intrapsychic structure, the ego was relatively weak and appeared as the rather intimidated servant of three masters: the superego, the id, and external reality. In setting up this structural model Freud reduced the importance of the topographic systems that had dominated his earlier closed-system model. Pcs and Ucs, which in this former model were spatial localizations in the psychic apparatus, now become qualities of mental phenomena that could be located in any of the structural elements of the psychic apparatus.

Although a dynamic relationship with external reality had been created

through the medium of the concept of the ego, reality had not assumed its full significance. It was not until 1927, in *Inhibitions, Symptoms and Anxiety*,[16] that Freud came to appreciate more fully the implication of his change to an open-system model. Here, the significance of reality as a dynamic force becomes more fully apparent. This will be discussed in more detail later in my presentation.

First, let us return for a moment to the structure of the psychic apparatus as it appears in *The Ego and the Id*.[13] We are all quite familiar with this structural model. However, although we have accepted the structural reformulation as it appears in this work, I do not think that we have fully appreciated its implications.

If we re-examine *The Ego and the Id*[13] carefully, it appears to me that Freud was attempting to reformulate his concept of the psychic apparatus in the form of a field theory in which energy moved through fields of force. What characterizes a field concept? By it we mean that the space in which energy operates is more important than the nature of the energetic particles themselves.

In the psychological sense, one might paraphrase this by saying that the fields in which psychic energy is active are, relatively speaking, more important than the nature of the energy quanta themselves.

The field theory was first formulated by Michael Faraday early in the Nineteenth Century. However, it did not come to play a significant role until the beginning of the Twentieth Century, with the replacement of the classic Newtonian physics by quantum theory.* I shall quote a short paragraph from a biographical article that summarizes this theory succinctly:[17]

"What is so revolutionary about the field concept? Just this. Up to Faraday physicists had concentrated on the material particle. From the particle concept they attempted to derive all phenomena. Physical processes were explained by laws of Newtonian motion and forces of mutual interaction working upon the particles. Faraday relegated the particle to the background and enthroned in its stead lines of force throughout space. To Faraday what was of critical importance was not the electric or magnetic particles but the space in which they operated. And this is the whole basis of the field concept. In field theory it is the geometric and physical condition of space itself that is fundamental."

Ego, id, and superego are no longer spatial localizations as were Cs, Pcs, and Ucs, but rather fields (or systems) in which energy is present and organized in different ways. From a spatial point of view they will be seen as structures; from a temporal point of view they will appear as functions. Cs and Ucs now become qualities or characteristics of energy organizations in different fields of force. The whole concept of the psychic apparatus as interacting fields of force in which the structuring and functioning of the field are of relatively greater importance than the nature and the quantity of energy involved may lead to important revisions of our present view of the significance of "economic"

* The formulation of the field theory by Faraday was, of course, relatively undeveloped. Clerk Maxwell's formulation of the electromagnetic field theory and its subsequent development were much more elaborate and detailed. However, for our purposes here, the basic concept of the field theory is sufficient.

factors in metapsychology.* In line with modern theories in physics in which the emphasis is on the degree of organization rather than the quantity of energy, we should be forced to revise our models in terms of their different levels of organization and their ability to maintain themselves in a steady state by means of feedback mechanisms.

Colby[1] in his most stimulating book, *Energy and Structure in Psychoanalysis*, has attempted to develop a model of the psychic apparatus utilizing these concepts to a certain extent. It is an effort most worthy of our thoughtful consideration in spite of its highly theoretical character. Colby's cyclic-circular model, although quite complex, is most stimulating. Unfortunately, there is insufficient space here for a detailed discussion of his provocative ideas.

Strauss[21] in a recent paper has formulated a field-identity theory that is also related in some respects to my point here. However, I cannot go into detail about this theory at this time, either.

Let us examine some of the statements that Freud makes in *The Ego and the Id*.[13] "The ego is not sharply separated from the id; its lower portion merges into it .... In the ego, perception plays the part which, in the id, devolves upon the instinct .... Its psychological function consists in raising the process in the id to a higher dynamic level (perhaps by transforming freely mobile into bound energy, such as corresponds to the preconscious condition) .... The ego is an organization marked out by a very noteworthy tendency toward unity and synthesis: the id has not this character—it is, so to speak, all in pieces, and its individual impulses pursue their ends independently and regardless of one another .... Instincts fill the id; to put it shortly, all energy in the id comes from them."

In these brief quotations, I believe we see some indications toward the change in model, whereby ego, id, and superego become fields of force containing different levels of organized energy. However, if one looks at Freud's formulation from the point of view of field theory, one is struck by a certain contradiction. If it is true that the three psychic structures represent fields, it is difficult to accept Freud's formulation of the id as "a chaos, a cauldron of seething excitement." It must have some type of organization, even though this be greatly different from that associated with the ego.

Before continuing with this line of thought, I should like to point out another change in Freud's model that is also of great significance. This has to do with his abandonment of the fluid or hydraulic concept of energy and the substitution of an energy model that we may characterize as quantum concept. I think that this is related to the basic changes that had occurred in the field of physics and with the development of quantum theory as a replacement for the concepts of classic Newtonian physics. Throughout the metapsychological papers we find references to the concepts of cathexes and countercathexes, mobility of cathexes, and the binding and loosening of energy, all of which fit with a quantum-field model more than with the fluid model. This also occurs in

* Such recent formulations as those of Hartmann[18-20] regarding ego apparatuses of primary and secondary autonomy and the derivation of the ego and the id from an undifferentiated matrix would necessarily be considered here from this point of view.

The Ego and the Id.[13] It becomes even more apparent in *Inhibitions, Symptoms and Anxiety.*[16]

This monograph Glover[22] calls "a work which more perhaps than any of Freud's clinical contributions has been misunderstood and neglected by psychoanalytical students." In this work Freud accorded the ego a more important role than ever before, re-evaluated the significance of external reality, and reformulated his original theory, which stated that anxiety arose as a result of dammed-up libido. In its place he developed the concept of anxiety as a danger signal arising in the ego to ward off the traumatic state of helplessness. Rapaport[4] outlines the changes that occur between *The Ego and the Id* and *Inhibitions, Symptoms and Anxiety* as follows:

"Yet as a witness that this concept of the ego is still one within a context in which drives are the only crucial and ultimate determiners of behavior, the ego is characterized by Freud as a driver who can direct the horse (the id) only where the horse wants to go. But by the time *The Problem of Anxiety* was published (1926) this had changed radically. The ego appears as an independent agent of great power and authority. It represses the instinctual impulses and has a rich equipment for defending itself against them; namely, the mechanisms of defense and the warning signals. How was this change to be accounted for? The ego, according to this theory, acts under the influence of external reality. It is first of all the role of external reality that has changed. The instinctual danger represents a reality danger which was met in the past and is expected to be met again when the instinctual demands are acted upon."

Anxiety becomes an ego mechanism, a trigger. This concept of anxiety as a trigger is of greatest significance to us. As is well known, Freud makes anxiety the central problem of neurosis. He states:[16] ". . . symptoms are only formed in order to avoid anxiety: they bind the mental energy which would otherwise be discharged as anxiety. Thus, anxiety would be the fundamental phenomenon and main problem of neurosis" (page 119).

However, the concept of anxiety as a trigger (that is, as a feedback mechanism to preserve a steady state), is difficult to conceptualize in terms of a hydraulic or fluid-current model. It is true that Freud never resolved his two theories of anxiety and felt that both forms might exist. Nevertheless, I maintain that he could not resolve this seeming contradiction because he had not clearly formulated the change in the underlying energy model. Certainly, psychic energy based on the model of a fluid current is too mechanical an idea. Such a current can be "dammed up," but it cannot, with any elegance, "signal" or "trigger." The fluid-current model of classic physics was not sufficiently flexible to meet the demands of the profound change in model from closed to open system which has been discussed above.

Freud was also not completely satisfied with his concept of quantitative energy changes in the psychic apparatus as the sole or major source of psychic phenomena. In *Beyond the Pleasure Principle*[23] he relates pleasure and unpleasure to intensity rather than to a simple quantitative increase or decrease of excitation per se:

"We have decided to relate pleasure and unpleasure to the quantity of excita-

tion that is present in the mind but is not in any way 'bound'; and to relate them in such a manner that unpleasure corresponds to an increase in the quantity of excitation and pleasure to a diminution. What we are implying by this is not a simple relation between the strength of the feelings of pleasure and unpleasure and the corresponding modifications in the quantity of excitation; least of all—in view of all we have been taught by psychophysiology—are we suggesting any directly proportional ratio: the factor that determines the feeling is probably the amount of increase or diminution in the quantity of excitation in a given period of time" (page 2).

In *The Outline of Psychoanalysis*[24] Freud again maintains the rhythm of change:

"The raising of these tensions is in general felt as unpleasure and their lowering as pleasure. It is probable, however, that what is felt as pleasure or unpleasure is not the absolute degree of the tensions but something in the rhythm of their changes." (page 16)

In these brief references, it appears that Freud was struggling with his basic quantitative concept of psychic energy and tending toward a revision of his concept of the pleasure-unpleasure series of affects. There appears to be some attempt to reformulate the purely quantitative concept and to include the rate or rhythm of the process as a significant factor. It is important to note that the link between pleasure and unpleasure is very close in a purely quantitative formulation. Modern theory in biology and physics has changed markedly in its ideas regarding the crucial significance of quantitative changes. McCulloch summarizes this as follows:[25]

"Biologists, following the lead of physicists, used to think that energy was the most significant variable in living systems. But within the last few years, as the result of developments in thermodynamics and in information theory, particularly as it is applied to servomechanisms, they have come to realize that the crucial thing to be quantified is not energy, but order, that is, the degree of organization of the system—what we may call negative entropy. This is because the behavior of the system is determined by the difference between its actual state and the state toward which it is being guided by the inverse feedback of information. In short, such devices are error-operated, and that makes them purposive, in the one sense in which this word has an objectively verifiable significance."

Kubie[26] quotes another challenging statement by McCulloch which is pertinent here:

"In a personal communication, Dr. Warren McCulloch challenges the assumption that variations in quanta of energy are important in the physiology of the brain which underlies psychological processes. He points out that this aspect of Freudian theory derives from Bruecke and Johannes Müller, whereas the current trend in theory is to look upon the nervous system rather as a center for the handling of information. If this is true, it follows that as long as minimal energy requirements of the brain are supplied, not only is their total quanta small, but the variations in this quanta are insignificant in magnitude; furthermore, McCulloch argues that this minimal essential energy may

be derived from general metabolism and not generated specifically within the nervous system. He adds that it is 'linked to nervous processes by energetic phosphate bonds through some ultimate acid base reaction.' On this basis McCulloch challenges the quantitative concepts of psychoanalytic theory as having been appropriate twenty-five to fifty years ago, but as leading 'to nothing but confusion.' His comment concludes:

'It is, in fact, Freud's hanging onto this antiquated concept of energy that troubles me most.' "

The point that I am trying to emphasize, even at the expense of being repetitive, is that beginning with *The Ego and the Id* Freud fundamentally changed his basic models of the psychic apparatus and of psychic energy without, however, being fully aware of this change and, therefore, never following through consistently. This, I believe, accounts for many of the seeming contradictions that we have in analysis today. I have already cited one; namely, Freud's inability to resolve his concept of anxiety. In his original formulation, based upon the closed-system hydraulic model, anxiety was a result of dammed-up libido. In *Inhibitions, Symptoms and Anxiety*, it became a much more delicate and refined concept; namely, a signal mechanism whereby a small amount of energy triggered an organized set of reactions in a field to prevent danger to the organism; that is, to restore a steady state.

Another manifestation of the change is in the Addenda to *Inhibitions, Symptoms and Anxiety*,[16] in which Freud modifies and reformulates certain of his previous views. The reformulation of resistance and anticathexis is in the direction of field theoretical and open-system concepts in which structural and functional factors play a much more important role. The same holds true for the discussion of repression and defense in which Freud details the different functional organizations of the ego that deal with internal dangers and briefly mentions the developmental aspects in terms of different levels of organization in the ego. These changes are directly related to the line of thought developed here.

If I may retrace my steps a little, I should like to discuss briefly *Beyond the Pleasure Principle*.[23] This work appeared between the metapsychological papers, which laid the groundwork, and *The Ego and the Id*,[13] which represented the formulation of the transition from a closed system to an open one and from fluid-energy to field-theory models. It appears to me that *Beyond the Pleasure Principle* represents Freud's final effort to prove to himself the validity of the closed-system hydraulic model. It is this closed system carried to its ultimate logical conclusion. Freud clearly indicates its speculative character at the beginning of Chapter IV:[23]

"What follows is speculation, often far-fetched speculation, which the reader will consider or dismiss according to his individual predilection. It is further an attempt to follow out an idea consistently, out of curiosity to see where it will lead."

Earlier, I mentioned that the law of entropy applies only to closed systems. Szasz[27, 28] has recently shown that the life and death principles as formulated in *Beyond the Pleasure Principle* represent the attempt to utilize the second

law of classic thermodynamics as a model and to apply it to the psychic apparatus. From the point of view presented here, it seems to me that *Beyond the Pleasure Principle* represents, on the one hand, additional proof of Freud's use of the closed-system model and, on the other hand, an intermediate step toward its discard as it occurs in *The Ego and the Id* by carrying the analogy to its ultimate conclusion.

It is significant that, although Freud maintained the Eros and Death drives first formulated in *Beyond the Pleasure Principle*, he progressively opened his system model and reduced the exclusive importance of the drives.

The question that now arises is, What is the relation of this theoretical discussion of psychic energy and structure to the libido theory, and particularly to its energetic and economic aspects? Here, again, we must retrace our steps because, as we know so well, Freud's concepts often changed markedly in the course of the development of psychoanalysis.

Originally, in the first model of psychic energy and structure as outlined in *The Project*,[3] Freud spoke of energy simply as a quantity of excitation without any attempt at definition of its origin. This was an open-system neuronal reflex model. Excitation arose from external stimuli as well as from internal sources, and the ego functioned as an inhibiting force. There was no further specific delineation of the nature or source of the psychic energy.

It was not until 1905, in the *Three Essays on the Theory of Sexuality*,[29] that Freud explicitly formulated his concept of "drive" and utilized the term "libido" for the sexual component. In spite of the widespread use of the word "instinct" as a translation of *Trieb*, I prefer to use the word "drive." It is interesting to note that Freud differentiated between instincts in animals and his use of *Trieb* in relation to humans. For instance, in the paper on *The Unconscious*,[30] he states: "If inherited mental formations exist in the human being—something analogous to *instinct* in animals—these constitute the nucleus of the Ucs"* (page 195).

It is important to recognize that Freud's development of the libido theory actually relates to his special theory of neurosis. At this time he had already changed his basic model to that of a closed system, within which he studied primarily the vicissitudes of the sexual drive. His clearest formulation of this is in *Instincts and their Vicissitudes*.[8] Incidentally, in this paper also we see the utilization of the closed-system model and the lack of any dynamic ego as a structure. The vicissitudes of the instincts that Freud discusses later reappear as ego defense mechanisms; they could not appear as such at this time because of the conceptual model. Freud here differentiates between libidinal drives and the self-preservative or ego drives, of which he says we know little or nothing.

From this point on, we are faced with Freud's efforts to convert his special theory of neurosis based on the concept of libidinal drives into a general psychological theory. There is recurrent difficulty in transforming the drive theory as it relates to neuroses into a theory applicable to a general psychology.

In the paper *On Narcissism*,[12] Freud introduces the concept of ego-libido

*The editor notes that Freud uses the German *Instinkt* and not the usual *Trieb*.

which he himself states is a difficult and obscure one. He also considers the possibility of discarding the concept of libido as deriving from sexual forces alone and substituting a concept of psychic energy in general, but feels that the time is not ripe for this. However, he is acutely aware of the conceptual and methodological difficulties with which he is faced.

In his efforts to generalize libido theory, he attempts to reformulate his whole theory of drives in *Beyond the Pleasure Principle*, which was previously discussed. In this work, libido no longer derives only from the sexual and erogenous zones, but now arises from the metabolic activity of all cells. Freud further states:[23]

"With the discovery of narcissistic libido, and the extension of the libido concept to the individual cells, the sexual instinct became for us transformed into the Eros that endeavors to impel the separate parts of living matter to one another and to hold them together; what is commonly called the sexual instinct appears as that part of the Eros that is turned towards the object" (page 79).

Although Freud retains his drive theory to the end, it becomes generalized in the form of Eros and the destructive drives, which are maintained throughout as "the somatic demands upon mental life" and "the ultimate cause of all activity." They furnish the biological basis of psychic energy. "There can be no question that the libido has somatic sources, that it streams into the ego from various organizations and parts of the body"[24] (page 24). It is interesting to note here the use of the language of the fluid current.

On the basis of libido theory, Freud developed a special clinical theory of neuroses, which included his concepts of psychosexual development and erogenous zones. However, it is exactly here that the difficulty of the closed-system model becomes most striking. This difficulty is the methodological integration of the problem of object relations. At first, Freud stated simply that libido passed over to the object and could be withdrawn from the object. The main focus was upon the internal forces, the drives. The actual modes of the investment of libido in the object were not specifically formulated. Later, when Freud formulated the concept of ego-libido in his paper *On Narcissism*,[12] the ego became the reservoir of libido, which could then be invested in an external object or withdrawn "like the pseudopodia of an amoeba." The problem of object relations has always been one of the most obscure and poorly developed in psychoanalytic metapsychology. It is my feeling that the models used by psychoanalysis as described above have been a major stumbling block in the development of this aspect of theory. The partial shift to a field theory and to the quanta energetic analogy was made in an effort to formulate this aspect better. However, it remains a very thorny problem that requires much investigation and observation.

In his recent work, Erikson[31] has utilized, without explicit formulation, a type of field concept more consistently than anyone else and has also accepted the implicit change in energy analogy, but his work has been much more on a clinical level without theoretical elaboration.

Hartmann,[18-20] Hartmann *et al.*,[32] and Kris,[33] have elaborated more on the

theoretical aspects of psychic structure than any others since Freud. However, it appears to me that they have encountered methodological problems by retaining the fluid energy analogy. This has led Hartmann to postulate a number of different forms of drive energy which have resulted in an increasingly complex and cumbersome theoretical structure. This is not the place to analyze Hartmann's theories in detail, important and significant as they are. It appears to me that a more consistent application of the field theory concepts and the quantum energetic analogy in relation to analytic metapsychology could lead to a more parsimonious concept of psychic energy. A careful examination of our use of quantitative concepts of energy is also very much needed. Kubie[34] in 1947 had called attention to this very pointedly. He states that "It is my thesis rather that the easy assumption of quantitative variables as the only ultimate explanation of every variation in behavior is one of the seductive fallacies to which all psychological theorizing is prone."

Eventually this would be more directly applicable to clinical investigation and even experimentation. For example, the recent intensive work in the field of sensory deprivation could be integrated much more directly into psychoanalytic theory on the basis of a field theory model. The work in this field is related more closely to the theory of drives than appears on the surface. The "stimulus hunger" that appears so strongly under sensory deprivation points to the role of external stimuli as necessary trigger mechanisms to activate drive energy. The role of the day's residue in dream formation and that of subliminal or preconscious perception as investigated by Charles Fisher[35] also become more comprehensible in terms of a field theory.

In terms of an open-system field theory, the role of motor activity and effective action also become more important than they have hitherto been in psychoanalysis. In the closed-system model, activity (motility) was relatively unimportant, representing more or less the overflow of the energy within the system in order to prevent "damming-up." The nature of the activity was important only in giving us a clue to the distribution of the forces within the system. The positive elements involved in action are relatively unimportant. This may be valid for a special theory dealing with neurosis, but it is too narrow a formulation for a general theory of human psychology. The adaptive, constructive, creative aspects of action must also be included.

The above discussion has been on a highly theoretical level, seemingly somewhat beyond the focus of this monograph, which is based upon the systematic restatement of the libido theory. In attempting to formulate the energetic concept of libido theory in operational form, I have been led apparently in the opposite direction. The reason for this is that, at least for myself at the present time, the energetic-economic aspects of libido theory cannot be reduced to an operational level in their present form. As they now stand they form a theoretical structure that is not amenable to operational reduction. In my opinion, this can be done only with the further clarification and reformulation in the form of a consistent field theory that would focus our attention on problems arising in the field of object relations. Through such a series of propositions it would be possible further to clarify the concept of psychic energy and libido and then reduce them to an operational level.

Libido theory represents a special clinical theory within the framework of the metapsychological (or general) theory of psychoanalysis. Eventually it will assume a similar position in a general theory to that of classic Newtonian physics. Once thought to be universally applicable, it is now known to be valid only for macroscopic bodies, but not for the microscopic or ultramacroscopic dimensions. Freud comments on this very appropriately:[36]

"People complain of the unreliability of science, that she proclaims as a law today what the next generation will recognize to be an error and which it will replace by a new law of equally short currency. But that is unjust and in part untrue. The transformation of scientific ideas is a process of development and progress, not of revolution. A law that was at first held to be universally valid proves to be a special case of a more comprehensive law, or else its scope is limited by another law not discovered until later; a rough approximation to the truth is replaced by one more carefully adjusted, which in its turn awaits a further approach to perfection."

I also recognize that I have not related my presentation to the clinical aspects of psychoanalysis. This is in part because general psychoanalytic theory is, in a sense, "above and beyond" the direct relation to the application of psychoanalysis in clinical practice.

However, let me point out that the focus of clinical psychoanalysis on ego psychology is a direct result of the change from a closed system to an open one. The concern of clinical psychoanalysis in recent years with countertransference also results from this change in conceptual model. As long as the psychic apparatus was a closed system, the focus was on the patient, and the role of the analyst could be relatively relegated to the background. With the open-system model, it became necessary to consider the interaction (that is, the "field") between the two more actively. I am fully aware that for practical purposes one must work as if one were dealing with a closed system in order to have some control over the variables. Theoretically, however, it is of great importance to recognize the limitations of this model and to be aware of the problems which it creates.

I should like to anticipate a number of objections and criticisms to this paper that I am sure will be raised. I fully recognize that my presentation of the metapsychological aspects of psychoanalytic theory is, in many respects, fragmentary. However, to give a thorough exposition of the energy concept in analysis would require at least an entire monograph and would go far beyond the scope of this presentation. I also recognize that I have not elaborated sufficiently on the transformation of the psychoanalytic models to a field theory and to the quantum-energetic analogy. Again, I can only plead considerations of time and space and point out that the full documentation and elaboration of this would require much more space than is available to me here.

However, I hope that the theoretical ideas presented will furnish a stimulus for thoughtful consideration and will assist future investigators, even if only slightly, in clarifying their thinking in this enormously complex field.

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Discussion of the Paper

Nevitt Sanford: Let me proceed immediately with some analysis and criticism of Pumpian-Mindlin's paper. The first question to ask, I suppose, is: Is this trip really necessary? Must we learn all these terms from physical science in order to keep up to date in psychoanalytic theory-making? I find these theoretical models as hard to understand as the libido theory itself. With respect to these new terms and the activities in which they are employed, I suggest that we should be interested in them, but that we should not libidinize them.

The question really is: What are the advantages and limitations of such models? I first call attention to some of the dangers implicit in this activity. In psychology we have been plagued for some years by a fascination with model-building on the part of our graduate students. Many of our ablest pupils have acted as if they believed they were not quite living unless they had concocted a theoretical model that would take care of everything, and one of their highest aims was to have a model that was pure, that is to say, not sullied by any reference to observation. I take it that the essential question to ask about a model is: Does it lead to any new observations, or does it expose gaps in our knowledge that could be filled only by fresh observations? With Freud, one has the impression that the observations usually came first. He, as we know, started with a "behavior theory" that bore a strong resemblance to very modern theoretical schemes, but he had to abandon it because he could not use it in clinical practice. The model did not lead him to new observations; the observations that he made by following his nose, so to speak, led to a change in the model.

In making use of analogies from the physical sciences, we should feel free to use them in but a limited fashion; we should not suppose that the terms of systems theory or information theory or quantum theory are perfectly defined and universally accepted, so that we need only to bring our psychoanalytic formulations into line with these new developments in physics. Actually, I suspect that when physicists talk among themselves they have some of the same kind of difficulty with concepts that we do when we discuss the libido theory. The propositions that Pumpian-Mindlin has stated in the terms of physical theory sound impressive, as if these were Reality itself, but what, after all, is a system or a field, and what kind of space is being discussed? I suggest that different writers mean different things by "system." For example, some have defined a system as "all of anything." This implies a boundary and the notion that energy crossing that boundary must somehow be transformed. Others, on the other hand, conceive of a system simply as a set of related variables. One achieves the impression that Pumpian-Mindlin likes open systems better than closed ones. He has a right to his preference, but I do not believe that he can base his choice on the deterministic aspects of the two; I suggest that open systems can be fully as deterministic as closed ones. This holds true in the case of "field"; the concept that we have been offered is probably too literal. Perhaps a field is better regarded, not only as the space within which particles move, but as a geometrical representation of relationships or equations. As for space, let us remember that this is some-

thing that in science is conceived and not something that exists, as it were, in reality, and that in conceiving of space we must specify what we have in mind: physical space, geometrical space, absolute space, non-Euclidean space, or something else. In short, we should feel free to choose concepts from physical science in accordance with what we need in order to conceptualize our observations. We must always be on guard lest we choose our model in accordance with its internal elegance, its fashionableness, or its reputation in another science rather than on the basis that it helps to order our observations and indicates a new direction for exploration.

As a history of the development of Freud's thought, I find Pumpian-Mindlin's paper fascinating, but not quite convincing. It may be that he overestimates the role of the model in Freud's thought. It seems to me that Freud used his models heuristically, referring, so to speak, to "that sort of thing"; I doubt that he was seriously restricted by the model that he had adopted. In the early shift from the open to the closed system there was no doubt a new accent on the psychological environment, but I do not believe that this led to any very serious neglect of "outer reality." I would suggest, concerning the changes in Freud's theories, that these were better understood with respect to the sociology of knowledge rather than on the basis of the intellectual requirements of model building. For example, the current accent on the ego in American psychoanalysis seems quite clearly to be a sociological matter rather than an outcome of a change in theoretical models. I should say the same with respect to the accent on countertransference.

Incidentally, it would be very interesting to study the development of Freud's thought in relation to his psychological biography. It seems to me possible that this will some day be done.

It seems that Pumpian-Mindlin and I want to go in different directions, at least in the short run. He wants to move in the direction of making psychoanalysis a general psychology, while I should like to move in the direction of a better conceptualization of the inner life. He wants to develop a more general theory, while I am afraid that strivings in this direction will make psychoanalysis less psychoanalytic. The attempts at general theory that we have today all tend to blur the distinctions that are so important to some of us, like the distinction between the libido theory of personality development and the ordinary academic learning theory. It is well to remember, again, that Freud's early theory, as set forward in the *Project*, was very much like contemporary "behavior theory." Freud gave up his early theory because it was not helpful in dealing with the facts from clinical practice. By the same token, modern behavior theory is virtually useless to the practicing psychotherapist. In developing a general theory, Pumpian-Mindlin wants to make psychoanalysis more like contemporary psychology. As a psychologist, I have had enough of behavior and of external stimuli, and want to concentrate more on inner dynamics.

It seems that how one looks at these things depends upon how one came into psychoanalysis and upon how Freud was being interpreted at the time. Pumpian-Mindlin and I started in different and widely separated places, headed more or less toward each other, and have now come face to face. When I

encountered psychoanalysis I had already been subjected to the kind of psychology that accents such things as overt behavior, the geographical environment, ego functioning, cognitive structuring, and so on. I should say that today the situation in psychology is much as it was then; there is constant pressure to accent these tangible and respectable things, when, in my view, what we really need is a more complicated theory concerning the transformations of inner psychic systems. I can well understand, however, how someone who came into psychoanalysis in the more usual way and was plunged immediately into consideration of inner dynamics might very well move in the direction of increasing accent upon the external, the realistic, and the "higher."

Actually, I share with Pumpian-Mindlin the view that we must have a more general theory concerning the development and functioning of the personality in its social and cultural environment. There is no doubt that such a general theory must include all those aspects of behavior and all those determinants of behavior that he has mentioned. I would not object if this general theory made use of analogies from physical science, provided that the conditions that I have regarded as necessary were met. However, let us be sure that, as we move in this direction, we lose nothing of the psychoanalytic heritage, which in the world of today means accent on the inner life and on the derivation of complicated processes from simpler and more primitive ones.

KUBIE. Does Eugene Pumpian-Mindlin feel that anything that Nevitt Sanford has said is based on misunderstandings that he would like to clarify?

EUGENE PUMPIAN-MINDLIN: I desire to make one or two comments because I think that perhaps you somewhat misunderstood what I was saying. I was not in any way attempting to formulate new models. I was attempting to tell you what models are being used. In my presentation I tried to say that we should approach analysis from the point of view of the implicit and explicit models that exist in it and that were used at times consciously and at other times without awareness by Freud; also, that we should do so in the hope that by making them explicit we should be able to achieve better results with them.

You have asked whether we need models. We do. I think most sciences use models or, if you prefer, analogies. As a matter of fact, one of the things that I did not mention was an address that I am sure you will remember, the one given before the Psychological Association by Robert Oppenheimer[1] on analogies in science. In it he stressed the importance and significance of the conscious use of analogy, as well as the dangers and limitations inherent in their use. It would help us a good deal if we clarified and made explicit just what models we are using and under what circumstances. We shall then be able to judge the directions in which these concepts should lead us.

I neither implied nor intended to imply that Freud used the wrong model. What I did attempt to point out was why he changed models and what advantages he thus gained. Certainly, the closed-system model had an enormous advantage in the development of analysis; at a certain point in his development, on the basis of the utilization of the closed-system model, Freud saw certain limitations that were imposed upon him in his conceptual formulation, and he went beyond it. This was the point that I was trying to make.

I should like to say also that I agree that sociopsychological conditions

probably played a role in the development of ego psychology. I think that there were many factors. This, of course, is implicit in the open-system model. I think that, in changing the model and his energy concept, Freud was trying to find something more suitable for a general psychology.

You are saying that we are approaching each other from opposite directions. I quite agree. At one point Freud himself said that sometimes it will be necessary for psychoanalysis to meet academic psychology and to combine with it in the interest of a general psychology. All I am saying, from the analytic side, is that I hope that we can clarify our models and prepare ourselves for a more general theory so that when academic psychology and psychoanalysis do meet they will not collide violently.

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Panel Member: I admire the organization and the elegance of the paper under discussion, and I was almost swept away by it, but there were a few sentences from time to time that made me sit up sharply and pay more attention to their contents and listen less to their melody.

I also admired Sanford's ability to see and point out the major issues involved. As I read Pumpian-Mindlin's presentation I could not see the major issues nearly as clearly as Sanford did, and I can second what he has said about them. However, I have a few more specific questions about the paper.

In the first place, it seems to me that Pumpian-Mindlin is implying that one has the obligation to use the most modern model available.

Pumpian-Mindlin: You have misunderstood me. I specifically did not say that.

Panel Member: It seems to me that, just because a new scientific model is available, we need not employ it in psychoanalysis, even though we may do so if the situation calls for it. Let me give a specific example. Konrad Lorenz, who in my opinion is one of the most perceptive of the ethologists, formulated his model of animal instinct theory during the 1920s, and especially during the 1930s and the 1940s. Although I am sure that Lorenz is a sophisticated scientist, he prefers the hydraulic model even though he knows that there are other models, including electric or electronic ones and the quantum theory; nevertheless, his hydraulic model has served him very well in organizing his data, so that I do not think we should point out to him that his model is out of date.

Pumpian-Mindlin: I do not advocate modernity at any cost. What I am specifically saying is that one reason why it is important to make a model explicit is that, while models are useful devices, they carry with them certain dangers; for, while they help us to see some things, they also prevent us from seeing others. Consequently, one must make a model explicit so that we may realize, not only what it enables us to see, but what it prevents us from seeing.

Let me point out specifically that the closed-system model that is the basic model in psychoanalysis is one that we still use experimentally, that we still use clinically, and that is still extremely useful in that it has given us a great

deal of insight. However, it has also blocked us from some certain observations, and that is exactly what led Freud to reformulate and recast his whole theory. When he had reached the conceptual limitation of his original model, he turned to this closed system and still needed something else.

This is the point that I have tried to make, but I am not speaking for modernization as such. It is significant in this connection that Lorenz says the same thing; incidentally, I might mention that Lorenz has recently expressed reservations as to the closed system.

Difficulties arise when one uses a model without recognizing the limitations implicit in it. The mere development of the quantum theory has not in any way invalidated classic Newtonian physics, which still applies and is still valid. However, Newtonian physics was once thought to be completely and universally valid. It is now known to apply in certain special cases and under certain special circumstances, but it does not hold for other circumstances to which it does not apply. This is the only point that I have tried to make, and I say this perhaps somewhat vigorously because it has been said that I am trying to introduce a new system. I am not trying to do so; I am trying to make something explicit, and I think this is the important thing.

OSTOW: I should like to leave the question of models and take up that of energy, which is part of the title of the paper under discussion.

It seems to me that Pumpian-Mindlin, without specifically saying so, went easily from the concept of metabolic energy to the concept of instinctual energy. This particular relation must be explored in great detail and quite explicitly, because I think it is irrelevant, when we talk about instinctual energy, to bring in the question of metabolic energy. In the first place, Freud never had this in mind when he wrote about instinctual energy, and I do not believe that any serious thinker in the field of psychoanalysis considers that instinctual energy is a function of the amount of metabolic energy available to the brain. Instinctual energy is conceived at an entirely different level of conceptualization; it is a completely different thing. Instinctual energy refers only to the fact that the animal or the man in question seems to be striving to achieve some particular goal. The energy is a hypothetical quantity that accounts, we believe, for the striving. The relation of this psychic energy to any metabolic energy, if such a relation exists, is certainly one that nobody has explored or stated specifically. Second, Pumpian-Mindlin said that the energy theory to date is not an operational theory, and I must also take issue with that, since I think that the energy theory is an operational theory, and certainly was so to Freud, who felt that he could observe energy changes in his patients and correlate them with disease processes. I have a presentiment that the new drugs that we now use in the treatment of mental illness operate principally by affecting the energy supply. If my belief is correct, the theory of energy will be extremely important in determining how to use these drugs most efficiently, and the level of the theory will be raised sufficiently to become operationally verifiable.

Finally, it seems to me that in talking about models there are four fundamental postulates about energy that must be considered: first, the fact or postulate that there is a constant generation of instinctual energy that increases

its potential and that increasing the potential may produce either defense or disease; second, that the consummation of a drive results in a decrease of this energy; third, that the energy is displaceable; and, fourth, that extreme variation in either the amount or potential of energy is associated with disease.

These postulates, it seems to me, are the cornerstones of energy theories and, if any model is to be useful it must include, or make reference to, these four points.

NATHAN LEITES (*Yale University, New Haven, Conn., and Rand Corp., Santa Monica, Calif.*): I think the principal point in our discussion is the term "model," and I should like to mention a suspicion that for obvious reasons cannot be confirmed; namely, that if each of the participants in this discussion were asked to define a model and to give an example, we should get an impressive variety of answers. I myself should probably write a blank. Other answers might be complicated, but would show great diversity. In fact, we have here a situation exactly of the kind to which Wolfenstein referred earlier. We are all talking about models, and somehow it seems appropriate to assume that we all mean the same thing, which I do not believe is the case. One meaning of the term "model" could be exemplified in a subject about which I know a little, namely, economic theory. The economic theory of free competition could be called a model; it proceeds from a limited number of axioms, and from these axioms we deduce a considerable number of consequences. The only real question is how useful is the model.

There is another meaning of the term "model" to which reference has been made, namely, an analogy.

These two meanings of the term seem to me to have absolutely nothing in common. In the first case a model is a theory; in the second case it may be a step toward the production of a theory.

What I desire to re-emphasize follows Sanford, whose point of view I share. If I understand the situation correctly in physics, what happened in the 1890s was that a number of observations were made that seemed to be inconsistent with the theory then prevailing, that is, with Newtonian physics. This led to a search for a new theory. About 1919 a situation developed in which both the proponents of the old and of the new theory made predictions as to what precise observations would be made regarding, I believe, an eclipse of the sun. The observations agreed exactly with the Einsteinian forecast and did not accord with the Newtonian predictions. Accordingly, a new physics was formulated.

We do not seem to have a similar situation in the history of psychoanalysis. What were the clinical observations that seemed entirely unmanageable by the old "model"?

PANEL SPEAKER: Freud gives you the answer. He makes it explicit that there is something beyond the ego and the id and beyond the pleasure principle when he says he has been impelled to re-examine his model because of the fact that neither analytic theory nor analytic therapy has produced the results that were or could have been expected. He said this in the introduction to one of the psychological papers. What I am saying is that we did not have a successful experiment by which to test the truth. However, we did have the

unsuccessful experiment in which the limitations of the previous model were revealed, and this is why Freud reformed it.

PANEL SPEAKER: That is true, and it brings us back to what I tried to say originally. Freud reformulated his theory, and subsequently new propositions arose, concerning, for example, the ego and the unconscious. The precise question is whether these new propositions have among their theoretical premises the new model. In other words, is the new model simply a sociopsychological tool for the production of the new proposition, or is it actually a theory that belongs to the logical premises of the new proposition, as in physics? Today a new observation can be theoretically explained by the new physics, but I do not believe that it is the same in psychoanalysis. Whatever the occurence of the new proposition is (on countertransference, for example), once we have reformulated our theory, the model has done its duty, at least for those who are unwilling to be guided by the facts. This is the alternative formulation that I would submit.

BELLAK: I think one postulation of Pumpian-Mindlin with which we all agree is that it is good to make models explicit (with apologies to Leites for the term). I do not think anybody quarrels with that.

The second thing that Pumpian-Mindlin did was to trace the use of a closed-system model and an open-system model in Freud's thinking and then make some statements deriving propositions from the tracing of these models. We could have hoped that the third portion of the paper would have concerned itself with an application of the closed-system model and the open-system models to various empirical and clinical problems in which it could be demonstrated that one or the other has advantages. I suggest, if we wish to consider this further, that we pool our resources. This appears to be a good time for such a discussion, since obviously we have divided opinions on the open and closed models and their respective advantages.

SANFORD: I agree that we should accept Bellak's suggestion, which should prove most fruitful. If I understand him correctly, Bellak is suggesting that we should pose some problem involving an empirical question. I think the kind of difficulty that we have is with that part of the libido theory that indicates that there is a constancy in the total libidinal energy, which is merely distributed differently among different cathected objects at different times, as Bellak has pointed out elsewhere.[1] This was implied by Stanton in his discussion, in which displacement was very important. I think Stanton has been doing what most of us are trying to do: namely, attempting to save this notion of displacement. We want to be quite free about our use of displacement in explaining certain kinds of things that we observe, and we do not know whether this commits us to a closed system. We do not follow through on that. If we really believed that this concept commits us to a closed system, it would raise doubts in our minds, and I should like to ask Pumpian-Mindlin just what the present state of affairs is in this regard. It seems to me that in the older theory about the libido, where there is so much accent on the constancy of the energy being distributed here and there, this was mainly a theory about the neuroses and neurotic structures, and it seems to me that even now children and neurotic people act as if they thought they were closed systems. How-

ever, when their egos are functioning well, there is much more flexibility in this matter, and people are able to make interchanges with the environment; inputs become important, and we get more creative outputs, as it were. Consequently, it seems to me that we have, in effect, one kind of model for the structure of a neurosis or the structure of the undifferentiated world of the infant, and another kind of model for the whole personality, which embraces the ego and, possibly, other systems that have this closed aspect. That is to say, the translation of energy from within the system to without is very difficult.

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PANEL SPEAKER: How would Sanford account for the change from one model to the other? Specifically, how does an individual change models between childhood and maturity? I take no exception to the idea, but what is the process? What hypothesis accounts for it?

SANFORD: I think this has to do with the development of structuration in the ego and the availability of energy to the ego. The ego reaches a place where it is a system and functions as such and, because it actually has a different kind of relationship to the real world than the systems involved in this earlier closed-system type, we get more flexible, adaptable, and rational behavior. Why does the child behave as he does? I think that he does so through the process of growth and development in the ego, through experience and maturation.

BELLAK: If I understand you correctly, what you are saying is that the maturing perceptual apparatus is the system's increasingly open window to the world?

SANFORD: Yes, it could be put in that way. It has occurred to me that, instead of having the idea that all psychoanalysis must be a closed-system model or that you must have an open-system one, sometimes we invoke one model for some processes, and we may invoke another for other processes.

PUMPIAN-MINDLIN: One point with regard to these models: I thought there were other parts of this question that we should be able to disuss. I do not think that we should devote so much time to the models. Let us take a very simple example, namely, wit and humor.

One can look at this from the point of view of what goes on within the individual. This is the closed system. In other words, something is put into the individual. Somebody tells the jokes and the hearers either laugh or do not laugh, and what we examine are the dynamics of what goes on in the individual. This is perfectly true, and this is what Freud did in *Wit and Its Relation to the Unconscious*.[1] However, there is more to it than that. There is the joke itself, there is the person who told the joke, and there are the circumstances in which the joke was told. If you remain within this closed system, you see this in one aspect. However, if you look at it from the point of view of the open system, you see another aspect.

I venture to introduce the name of another physicist, namely, Niels Bohr,

whose principle of complementarity is one of the most important in modern science at the present time. It is really this that I had in mind; I should have made my own model more explicit. This is what I have been saying: that these are two complementary points of view, and there are probably more. As a matter of fact, as Sanford pointed out, there are many more. There is the point of view of academic psychology, of learning theory, and all of these have something to contribute in terms of our total grasp of the complexity of the human being. What I am saying is: let us be clear about what we are looking at, how we are looking at it, what we are using. We use learning theories and field theories, and each one of them requires a certain model. We gain in clarity when we are clear about this model, about which model we use, and about what particular aspect of an act we are examining or of the phenomena that we are examining. The clearer we are about how we are approaching a particular thing and what we are examining, the more we shall benefit by it, because then we shall realize what we know about the particular thing. This really, I think, is in terms of everything that I have said and is the point that I am trying to make.

I might mention also that I hoped this paper would stimulate thought, and I am very glad that it has done so.

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Rudolf Ekstein (*Reiss-Davis Clinic for Child Guidance, Los Angeles, Calif.*): Pumpian-Mindlin's contribution is free of the predilection of certain authors toward premature commitment to specific aspects of our theoretical assumptions. Many of our ideological wars could have been avoided had we been ready to take a historical viewpoint and had we been willing to inquire into the nature of proposed concepts and the development that is characteristic of them rather than to overidentify with our theoretical tools, which is an almost unavoidable disease of social scientists, and certainly of psychotherapists.

However, his presentation suffers from overcondensation and, while permitting us to see the complexity of many issues, he has included too many to permit us to look long enough at any one of them.

Consequently, my discussion will not do justice to the careful work he has undertaken, but it might lend itself to an assessment of the task involved. Essentially, this task, a philosophical one, is to clarify the meaning of our concepts and theories rather than to establish their validity. The establishment of validity is a second step, an empirical task. Although not valid, a theory may have meaning. The modern criterion for validity consists in giving us the methods necessary in order to confirm or disconfirm theory. An example in physics where this task was undertaken is P. W. Bridgman's classic *The Logic of Modern Physics* (1927).[1] Bridgman sees in the concepts of physics not "abstractions, but simply names for unique groups of experimental operations." I believe that the philosophy of operationism has had its powerful influence on psychoanalysis as well, so that today we are confronted

with the often voiced demand to review our concepts and to redefine them in operational form.

Another demand implies that many of these concepts are outmoded and suggests that we exchange them for newer and better ones. Kenneth Colby's recent contribution[2] (1955) expresses this point of view. I believe that Pumpian-Mindlin takes the middle way, and I am identified with this position. Pumpian-Mindlin suggests that the energy concepts in their present form cannot be reduced to operational propositions. He also seems to be opposed to the premature introduction of new theories. He is identified with *pragmatics*, a name Rudolf Carnap gave to the effort to examine existing languages and theories in their natural milieu.[3] As far as the science of psychoanalysis is concerned, I believe that we find ourselves in a historic situation in which it is important to examine the functions and limits of our theoretical models rather than to ask for requirements of theory that are not applicable to the stage of our science or to create concise concepts and theories that meet exacting standards, but will prove inapplicable to our clinical data. We must free ourselves from imitating other sciences. We may borrow from them, but only to the limit of usefulness.

Pumpian-Mindlin stresses the model and analogical nature of the concepts of energy and of structure. What is a model? If we look at a model toy car, we think of it as having exactly the same features as the real one, with the exception of size. Each feature of the real thing can be found in the scaled-down model. This is, however, only one very limited use of the term, a use that has tempted us frequently to take our model of the psychic apparatus too literally and to see more in it than is actually present. Our analytic models are more like analogies and expose us to constant dangers if we think of them as scale models. The spatial and physical models of psychoanalysis are then to contain similarities that permit us to get a picture of the mind. One is reminded of Jules Henri Poincaré's analogy, in his famous *Science and Hypothesis*,[4] in which he attempts to picture the meaning of the fourth dimension of time. For this purpose, he invented two-dimensional people, paper-thin, whose mathematicians finally find that the world must be three dimensional rather than two dimensional, as these paperlike, two-dimensional people, obviously influenced by projective tendencies, have thought. Poincaré's analogy does not explain the fourth dimension, but it does give us a beginning insight into the problem. The spatial concepts in psychoanalysis frequently have similar shortcomings; since they are borrowed from the physical sciences, they tempt us to go beyond the limits of the analogy and to expect more from it than the analogy can do for us.

The new is frequently described by means of analogy; that is, an attempt is made to reduce the new to something that is well known. This attempt to order the new into well-known regularities and to give it a safe place in our total experience is frequently attempted with inadequate linguistic means. The spatial analogies by means of which inner psychological experience is described seem to be a case in point. The very expression of "inner experience" as compared to "outer event" creates difficulties, since it seems to suggest a

locus for this experience. The notions of the spatial model of the psychic apparatus, the quasi problems of boundaries between the psychic apparatus and the outer world of reality, the boundaries between different psychic instances within the apparatus that are then compared with the boundaries between apparatus and outer world are useful, but actually dangerous, analogies. Early notions of the seething cauldron—the ego as the mediator between superego, id, and reality, and (so reminiscent of Plato's simile of the human mind)[5] reason, the driver and the horses, passionate hate and love—have given way to functional notions of psychic structure and have required reformulation also of the energy concept.

The early hydraulic model, a sort of plumbing system, speaks of psychic energy as a fluid current, electric or, as in other similes of Freud, comparable to water masses moving through the available river bed toward final discharge. It seems to me that these notions (Pumpian-Mindlin speaks of them as closed-system concepts that were later substituted here and there among open-system concepts) were particularly useful in the investigation of the dream and in the creation of dream theory, and had their powerful impact in developing that part of our technique that deals primarily with dream interpretation and with the discovery of the hidden unconscious conflict. Closed-system notions are typical for id psychology and for content interpretation.

While the topographical model serves us outstandingly in understanding the dreaming sleeper, as demonstrated so beautifully in Bertram Lewin's recent contributions,[6, 7] the ascent of the structural tripartite model takes care of these problems that stress the relationship between psychic apparatus and reality, between the waking person and the dynamic interacting environment. *Homo psychologicus* is now studied in interaction.

The spatial point of view stresses organization; the temporal point of view stresses interaction, growth, and change.

These different analogies live side by side and are frequently used interchangeably. Inasmuch as each has a communication function and is helpful in elucidating certain aspects of our clinical data, we wish to keep them, although for them we must pay a price, namely, the lack of theoretical clarity.

Our basic postulates, rather than being final constructs, are more comparable to outline maps of new, as-yet-unexplored territory that offer a way, a method toward explorations, after which final maps can be drawn; that is, concise, basic concepts can be defined. We might also say that we lack the intervening variables between basic explanatory concepts and clinical, usually descriptive, concepts. These basic concepts, still being in a stage of analogy rather than being names, as is the case in physics, for unique groups of experimental operations, are actually names that describe certain aspects of the psychoanalytic method that describe methods to be employed in order to fill in these "outline maps." This difference, however, is one of degree rather than of kind.

We must never forget that scientific research in analysis up to this time has been related primarily to psychoanalytic technique. Our therapeutic technique is also our primary research tool. It seems, therefore, valuable to follow one of Pumpian-Mindlin's hints in which he suggests that we relate the changes

in basic systems, in basic models, to technique. I wonder whether it might not be more fruitful to turn his suggestion around and to say that technical changes are often followed by theoretical advances.

Pumpian-Mindlin and other authors, for example Heinz Hartmann,[8] have claimed that theoretical advance is frequently ahead of technical advance. It seems to me that new theoretical advance is often nothing but the tacit admission that we have made a certain technical advance that up to that time was not explicit and is then mirrored in new theoretical assumptions. The introduction of modern ego psychology is a direct consequence of new discoveries in resistance or defense analysis and in character analysis. An interesting example of this notion is Helene Deutsch's paper on "as if" personalities, which indicates technical innovation without, as yet, the benefit of newer notions of ego psychology.[9] The increase in knowledge of the structure of psychic organization has brought about some de-emphasis of earlier notions of energy. The vicissitudes of the instincts are less in the foreground of present-day interest, and we are now more interested in the vicissitudes of ego organization.

This is also reflected today in the difficult situation that exists in our discussions concerning the energy concepts. We originally borrowed this concept from the physical sciences, where it was used in a quantitative sense. I recall the heroic but most unsuccessful efforts of Siegfried Bernfeld and Sergei Feitelberg[10] in the early 1930s when they attempted to measure libido. It became clear then that the analogy of physics applied to psychic energy has dangerous limits, and that he who wishes to "measure" psychic energy has an equally difficult problem, perhaps even more difficult than that which confronted Einstein when he wished to measure the time elapsing between events taking place in different places in different motion. The present dilemma seems to be that we insist on different kinds of energies that are in different states while, at the same time, we apply concepts of structure to different aspects of psychic organization. Pumpian-Mindlin expresses this in asking for a more parsimonious concept of psychic energy.

The fact remains that these theories live side by side, and that each, in the days of its creation, has had immense heuristic value.

I believe that the lack of intervening variables between basic and descriptive concepts, and also the fact that many of these basic concepts lack clear definition and are used with different meanings, make a clarification on a mere logical, theoretical level almost impossible and perhaps undesirable.

Therefore I propose that we use clinical data, for example, the data of any specific treatment hour, and try to understand them in terms of any of the available structure and energy models. It will then become clear how much each model does for us and what its limits are. I suspect that Freud's hesitation, as well as our own, to give up early models completely will turn out to be justified through their continued usefulness. Johannes Kepler's laws did not become obsolete when Einstein's formulations became available, although the former turned out to be mere special cases of more general regularities. Many of our early analytic models will have the same fate. Consequently, if we then return to clinical data, we shall find our attempted clarification more success-

ful. This integration of our theoretical needs and our clinical data will make obsolete an old dichotomy that Goethe has expressed as follows:

"Grau, treuer Freund, ist alle Theorie,
Und grün des Lebens goldener Baum."*

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* "Gray, good friend, is all theory, But green is the golden tree of life."

THE UNCONSCIOUS

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Introduction

"Unconscious" is a word of wide usage and of many meanings. The purpose of this paper is to examine some of the meanings that are relevant to psychoanalysis. To avoid weightiness in the present discussion, we refer, for a consideration of its many usages (in addition to the psychoanalytic ones), to James G. Miller (1942) who defines altogether sixteen meanings in academic, clinical, and popular use. Also, for the purposes of the current discussion, we presuppose that the reader has an adequate working knowledge of general psychoanalytic theory and practice.

If one were to attempt the thankless task of singling out the one most important contribution Freud made, the consensus would probably be that his formulations concerning the unconscious were the most valuable.

Freud's (1915) theory of the unconscious originally was primarily a construct. He observed neurotic symptoms, dreams, and parapraxes; he bridged the apparent discontinuity between rational behavior and symptom, between dream and waking life, between intention and parapraxes by one systematic inference; namely, that all of these seemingly discontinuous forms of behavior were part of a continuous, causally related series of events, a part of which, however, were not represented in the subject's consciousness and, therefore, must be considered "unconscious." Free association was the means discovered for completing the series.*

A great number of propositions concerning the various aspects of the unconscious have been developed but hardly ever systematically interrelated. In fact, an aura of near mysticism often surrounds the concept; many psychoanalysts have maintained, quite unnecessarily, that the nature of the unconscious sets psychoanalytic propostions apart from all other scientific hypotheses. Nothing could be further from the truth. By establishing causality in human behavior, Freud had automatically opened the door to rational, causal investigation of mental processes, ranging from relative unconsciousness to relative consciousness.

Once Freud had discovered unconsciousness as an inference, he formed concepts concerning the nature of the unconscious material, its origins, the dy-

* Everyone, of course, is aware of the fact that the concept of "unconscious" in psychoanalytic theory has had two different positions. At first, in the topographical model, Freud (1915) spoke of the systems "unconscious" (Ucs), "preconscious" (Pcs), and "conscious" (Cs). He later abandoned this picture of the mental apparatus for the structural model of ego, id, and superego (Freud, 1923). The relationship of the topographical to the structural model has never been discussed fully enough; it will be briefly touched upon later in this paper and by other contributors to this monograph. I am concerned with the quality of some processes: unconscious drives and feelings that are unconscious and that may or may not remain unconscious. In this sense the "unconscious" continues to play, of course, an important role in the tripartite psychoanalytic model. It is this process, rather than the system unconscious, to which we address ourselves.

namics of repression and certain formal characteristics of unconscious ideation. Accordingly, we shall consider the genetic, formal configurational, and physiological aspects of unconsciousness, as well as its energetic-economic, dynamic, and motivational characteristics within the structural model. The present paper must be considered both tentative and rudimentary. Many of the metapsychological implications of unconscious functioning will not be mentioned at all; others, at best, will be touched upon and briefly illustrated. The intention here is not to advance many, if any, new data, but rather to present systematic formulations that might be the basis for heuristic use.

Genetic Aspects of Unconscious Mentation

It is generally held that the newborn infant is not able to differentiate itself from its environment. Before there are well-articulated self-boundaries, the hand-mouth zone may be one figure on a dim ground, the mouth-breast area another. Whether we refer to Bertram Lewin's (1946) dream screen or to Rene Spitz's (1957) primary cavity, it is certain that for a long period both figure and ground are poorly defined. The child has difficulties not only with visual, auditory, and kinesthetic perception, but also with the concept of time and causality. Only slowly does the "secondary process" come about, the ordering of events into time and place and sequence to each other.

In other words, unconscious ideation does not "come" from anywhere: the unconscious ideational content to a large extent is precisely this poorly defined apperceptive mass (C. P. Herbart, 1942) of infancy that remains forever in the person's mind.* It is as though an infinite number of photographs had been taken, the vast number of which were unfocused, in varying degrees of infancy and childhood, and only a relative few in sharp focus; these are later superimposed upon earlier fuzzy objects as in a tremendous kaleidoscope.

If unconscious ideation is the history of ideation (that is, if the content of the unconscious is formerly—and poorly—perceived experience),† it is already clear that consciousness-unconsciousness must lie on a continuum. Since the ordering of time, place, person, and causality occur gradually over the years of childhood, it is clear that consciousness-unconsciousness must lie on a similar transitional continuum that is characterized by content from transitional genetic phases and from primary process to secondary process. One particular range of this continuum, the preconscious, has justifiably received increased attention of late. Since this extensive and separate subject requires treatment, I shall not consider it here.

In part, the poor *Gestalt* formation of childhood is presumably due to immature neurological status, and the perceptual progress must then be considered as predicated upon continuing physiological maturation; in part, a learn-

* To be sure, adult perception can also become part of unconscious ideation, becoming aggregated to the earlier apperceptive mass; such adult perception may be originally preconscious as, for instance, in the experiments of Fisher (1954) and of Klein (1949).

† A variation of David Hume's "*Nihil est in intellectu quid non antea fuerit in sensibus*" (There is nothing in the mind which was not previously in the senses), if one speaks of content, not of organic processes or *Anlagen*.

ing process of cause and effect, of association, of conditioning enters into the emergence of the rational world of the secondary process.

Every contemporary apperception must be considered as a configuration which is the resultant of many genetic parts. For example, the apperception of a contemporary woman is like a composite photograph into which reality and past apperceptions have merged, as of the mother in many different roles at many different times; of nurses, sisters, grandmothers and, of course, as is common psychoanalytic knowledge, features of male figures also. The relative influence of past apperceptions upon a contemporary apperception varies from subject to subject and from instance to instance in a given subject. By and large, the less organizing effect past apperceptions have on a contemporary apperception, the firmer established is the secondary process. Clinical psychologists are well aware of this process: E. H. Weisskopf (1950), elaborated the "transcendence index." She established the fact that different patients will introduce varying percentages of apperceptive distortions beyond the mean number of apperceptions introduced by an experimental population. We know that the relatively healthier people do better at "reality testing"; that is, they are less influenced by past apperceptions (and drives) than are less healthy ones. Moreover, this particular ego function of reality testing not only varies from person to person, but it may be influenced by fatigue, sleepiness, and drugs. Most interestingly, experiments with perceptual isolation have shown that a lack of external apperception will lead to an emergence of past apperception of a primary process nature. Also, we know that extremely strong exclusion of past apperceptions from contemporary ones may occur particularly in obsessives, thus precluding that (topographical) regression in the service of the ego that Kris (1952) has described as essential to the creative process.

Formal Aspects of Unconscious Functioning

The formal characteristics of the unconscious process are the features of the primary process described by Freud. They are usually referred to as condensation, symbolization, and displacement although, on various occasions, Freud also referred to other aspects, such as the lack of causality, and with it the lack of time references, the opposite meanings of one and the same word (with some etymological reference to the antithetical sense of primal words) and others. In that sense Freud's formulations are complemented by the characterization of children's thinking by Jean Piaget (1948) as concrete, syncretic, anthropomorphic, and animistic. E. Kraepelin (1919), E. Bleuler (1950), and other psychiatrists described schizophrenic thinking in formal terms overlapping in meaning those of Freud and Piaget. Heinz Werner (1948) illustrated the formal similarities in the thinking of children, psychotics, and primitive tribes. Many, if not all, features of the primary process can also be observed in oligophrenics. Recently Louis Linn (1953) illuminated the primary process thinking in patients with brain injury,* a process that often includes the use

* As H. Hartmann (1950) has done previously.

of *pars pro toto* (the part for the whole) or associative substitution by contiguity or similarity. Drugs, metabolic toxicity, and perceptual isolation can also produce the same characteristics; whenever ego functioning is poor, the primary process can be observed. Some day it will be possible to write a textbook of human behavior, including the whole range of pathological variations, from the standpoint of ego functioning and its disturbances; for the present, it still must be emphasized that the same primary process can be observed in a variety of conditions. Much of the field has simply not been brought up to date, including the extension of ego psychology to epilepsy and other organic disorders. A differential diagnostic clustering of specific types of primary process constellation is needed to replace "signs" in clinical and testing practice.

R. Holt (1956) has most recently and most clearly addressed himself to the formulation of the primary process in connection with Rorschach testing. He, too, stresses that thought processes may be arranged from the most primary to the most secondary. Following Freud, he considers thinking to be more primary the more it is organized and compelled by drives, and the less it is sublimated and neutralized. Aside from this characterization, that of preoccupation with instinctual aims, he discusses the formal aspects, including autistic logic, loose types of associative links, and other distortions of reality, in addition to the basic processes of condensation, displacement, and symbolization.

Discussing a continuum of primary-secondary process thinking, Holt then goes further: he formulates 25 content variables and 27 formal characteristics that he considers indicative of the primary process. The 25 content variables are grouped into ideational and affective drive derivatives: "only in instances where a display of affect occurs instead of the response are the latter scored" (page 18). Ideational drive representatives are divided into the libidinal aggressive and a residual nonspecific "anxiety or guilt about drive expression." Each of these are further subdivided for the purposes of a check list.

Among the formal characteristics such as "fusion of two separate percepts" (as in classical contamination) and "partial fusion of separate percepts," one category deserves particular attention because it enables us to illustrate a basic point; namely, that in the category of image fusion (Holt's term for a condensation manifested in the Rorschach test situation) he describes the fusion of "internal-external views of something," and gives the following example: "Internal-external views of something: 'Could be part of a woman's breast with a bow in between . . . this might be the lungs . . . she might be wearing the bow around her neck.' "

Again, Holt's examples clearly illustrate that in the formal characteristics of the primary process we may recognize the problems a child has in perceiving and organizing the world, including the establishment of the body image, the separation of inside and outside of the self—I and the outer world (P. Federn, 1952). In this sense, it again becomes clear that the formal aspects of the unconscious, the characteristics of the primary process, contain traces of the genetic evidence of gradual organization of experience into what is finally

secondary process* (what is acceptable as "secondary" process varies from culture to culture).

Configurational and Physiological Aspects of the Unconscious

It is in the nature of the development of any science that there is a good deal of semantic confusion in its early stages. As already maintained, unconsciousness has many meanings; it is necessary to examine two sources of frequent lack of clarity.

The first of the two meanings of unconsciousness, other than the strictly Freudian one, refers to physiological unconsciousness. By that we mean not total unconsciousness, as in a coma, but the unawareness of most vegetative and neurological processes in the individual. For instance, one is not aware of secretion of insulin by the islands of Langerhans, or of the nervous system's neuronal processes. For that matter, gastric or intestinal secretion and motility or cardiovascular, pulmonary, and dermatological processes are accessible to awareness only to the smallest degree, and only to the extent that kinesthetic or proprioceptive data from them can enter consciousness or to the degree to which these visceral processes are related to the voluntary neuromuscular apparatus. Visceral manifestations may be related directly to the symbolic unconscious process when they are at least partially under the influence of voluntary muscles such as the rectal sphincter or those of respiration. Consequently, it is important to make clear that some physiological processes are "unconscious" in the sense that they never have been conscious, cannot be accessible to consciousness, and are not characterized by symbolic (semantic) mentation in the sense in which the "psychoanalytic" unconscious is so distinguished.

From this it follows that these autonomous processes can be influenced only by their relationship to the cerebral cortex and its symbolic conscious and unconscious processes. We can therefore speak only of an indirect effect of psychodynamic conflicts upon the splanchnic and circulatory apparatus; the intestine does not express thought content per se, but it may react to thought content in certain rather nonspecific ways.

By virtue of this indirection and related nonspecificity it would be difficult, if not impossible, to conceive of specific neurotic problems or character traits as translating themselves by a one-to-one relationship into such syndromes as hypertension, peptic ulcer, colitis, and dermatosis. Thus, some of the propositions of psychosomatic medicine were probably largely misconceived as specific expressions of unconscious imagery in autonomously functioning parts of the body. These, however, are in principle related neither to imagery nor to verbal thinking. It might be said that some of the early specific psychosomatic propositions advanced were possibly predicated on a mistaken equation of the unconscious in the psychoanalytic sense (of experience which, at least, was once perceived and much of which consisted of imagery related to

* It is in this sense that I can understand K. Eissler's (1953a) statement that "with each act of perception ego structure is formed," and that his and my own theories on schizophrenics can be related to these hypotheses.

verbal representation) with unconsciousness (that is, the principal unrelatedness to and inaccessibility from consciousness) of vegetative autonomic nervous processes.

Another form of unconsciousness will be referred to here as configurational unconsciousness. Much of any learning process is characterized by an increment in performance, the attainment of which itself is not conscious and, for that matter, not accessible to verbal conscious understanding. Take, for instance, the acquisition of expressive or mechanical skills. For example, a teacher of social dancing or automobile driving may need to make his pupil conscious of steps in the learning process, but the result would be poor indeed if some "unconscious" automatization did not take control. The gradual steps of the learning process of any experience merge subtly into each other.

It is this unawareness of the blending of one experience into others to form a *Gestalt* that is referred to here as "configurational" unconsciousness. In part, it is probably predicated upon neuronal interaction and integration; as such, this process is not of a symbolic nature and, for the most part, it is not accessible to consciousness or insight on the psychoanalytic couch. If we say that psychoanalytic unconscious mentation consists of data that have passed through the perceptual apparatus at some level of organization in some form and at some time,* we must qualify the statement: each unit, each element of experience has passed through the perceptual apparatus, but the final result, the final configuration of attitudes or object relations, may emerge as a uniquely different whole that never passed through consciousness as such. The process of *Gestalt* formation is unconscious; this observation is not without clinical significance.

It is likely that some of the merged experiences can be reconstituted into their constituent parts; others cannot. Psychoanalysis as a therapeutic method is, after all, largely predicated upon the proposition that configurations of experience can be "analyzed" or, in other words, reduced to their component parts so that, with the help of the adult ego, they can be "better" reconstituted. In this sense, the accessibility of certain materials and the reversibility of the learning process are crucial problems in psychoanalysis posing its therapeutic limitations.

Forgetting, in many instances, may not be a matter of repression in the usual psychoanalytic connotation, but rather a configurational problem; that is, the merging of figure and ground. One might suspect that the important psychoanalytic concept of infantile amnesia could be predicated to a certain extent upon an erroneous concept; namely, that of considering configurational unconsciousness and dynamic unconsciousness as identical, the latter, of course, being motivated by the inacceptability to consciousness of certain materials. There is no question that dynamic infantile amnesia of traumatic or unacceptable instinctual material is often important, but I have yet to hear of an analysis that uncovered memories of the normal process of learning to walk! Configurational unconsciousness plays a particularly important role in infancy and childhood because, of course, experiential boundaries of mostly primary or

* Some of it consciously, some of it preconsciously or unconsciously.

early secondary processes are particularly poor. Many clinical analytic attempts to recapture early childhood material probably fail, not because of dynamic interference, but because of the configurational unconsciousness of these poorly defined and merged experiences.

The configurational merging of experiences into the apperceptive mass is the most stringent reason for making untenable a traumatic theory of neurosis. The present apperceptive distortion (for example, in a neurosis) is of necessity a function of all past experiences, not only of one.

This fact expresses itself in the clinical psychoanalytic experience that there is no one-to-one relationship between any characteristic of the patient and his experiences, and there may be a relative barrier to insight into the connection between some specific characteristics and earlier experience. Only a few insights relevant to certain analyzed characteristics can be concentrated on and integrated at one time. Fortunately for therapeutic success, restructuration need not be a more conscious process than the original emergence into neurotic configurations. The patient need not leave the analytic couch capable of delivering a dissertation on his psychoanalytic development, as is so often popularly believed.

Previously apperceived experience is accessible not only to psychoanalysis, but also in such clinical procedures as projective testing. The content-analytic techniques employed with the Rorschach and the thematic apperception tests attain data comparable to the unconscious and preconscious levels reached in psychoanalysis. Formal analysis of levels of functioning in projective techniques may give insight into autonomous functions not accessible to consciousness. However, it is probably the expressive techniques in particular, such as graphology, the Bender *Gestalt* test and, especially, Mira's (1958) myokinetic psychodiagnostic test that might reveal unconscious myoneural, constitutional-organizational levels of functioning entirely beyond the reach of consciousness. At least some of this functioning may be "configurational" in an experiential sense and stem from preverbal experience.

The level of unconsciousness of expressive movement has a direct bearing on problems of unconsciousness in relation to artistic talent or other giftedness. Originally considered entirely innate, it now appears likely that certain gifts may be the results of early variations in ego synthesis. Thus far psychoanalysis has been preoccupied primarily with unconscious content elements of artistic creativity, but it may now be possible to analyze formal and expressive features related to giftedness; these features are specifically the result of synthesis of autonomous functions of the ego, a configurational synthesis that never had conscious representation and, therefore, never appeared as direct psychoanalytic content material and can only be inferred as having taken place by emergence into a *Gestalt* of units of experiences.

The Unconscious in Relation to Motivational Theory

The motivational theory of the psychoanalytic psychology of personality is still often improperly equated with the concept of the id; that is, the instincts or drives. It needs hardly more than a reminder that, of course, psychoanalysis

conceives of motivation not only in terms of maturational organismic processes, but also as a series of object-related learned behavior patterns as well as the interaction between biological maturation and environmental experiences at various times. Thus, the psychoanalytic theory of motivation consists not only of the libido theory per se, but also of formulations concerning the ego and superego. Superego forces often motivate behavior; outstandingly, for instance, in such pathological conditions as moral masochism, the success neurosis, and a host of other normal and pathological circumstances.

Freud himself had formulated some relationships between his topographical model of the systems—unconscious, preconscious, and conscious, and his structural model of ego, id, and superego. It is generally agreed that not only the id but many functions of the ego and superego must be considered as unconscious. Indeed, it might be best to say that all functions as processes per se are unconscious. It is the results of ego functioning of which we are aware, strictly speaking. In a hypercathexis of thinking, in the obsessive or schizophrenic, the process itself may be conscious.

It would probably not be amiss to say that psychoanalysis sees the roots of all motivations as unconscious.* These roots may be related to the drives themselves (the original concept of the id as an "energy reservoir") or to the functioning of the ego and superego.

A major conceptual problem in psychoanalytic theory arises when one considers the relationship of unconscious motivation to conscious behavior. Traditionally, determinism has been the guiding principle of motivational psychoanalytic theory. The proposition holds that free association will unfailingly provide the links between conscious mentation and behavior, on the one hand, and unconscious motivation on the other, provided there is no undue interference with free association by unsurmountable anxiety, inhibition, or lack of motivation for surmounting the resistance to free association.

I reserve a detailed consideration of the role of determinism in psychoanalytic theory and practice for a later paper, but I find that a measure of attention to this part of the theory is unavoidably relevant to the concept of unconscious motivation.

The psychoanalytic concept of determinism as originally formulated by Freud is one of those tenents that have so far remained virtually unchanged. This is all the more surprising in that determinism is one of the concepts most clearly culture-bound to the scientific tradition of the end of the Nineteenth Century. It involves a concept of causality that implies rather rigid links in a chain of events and is shown in the clinical attitude of the orthodox psychoanalyst; provided the patient will only free-associate and the analyst will perform the prescribed verbal operations, "it will all come out in the wash."

The fact is that many analyses end in what E. Glover (1955) calls a stalemate; undoubtedly, they do so for many reasons, but one might suspect that

* When one speaks of instincts or drives as unconscious, it would be well to remember that drives or instincts are processes that are unconscious, not in the strictly psychoanalytic sense but rather in the physiological sense mentioned above, and for the most part not accessible to consciousness. The unconscious, in the psychoanalytic sense, may refer to the aims, nature of objects, or the motives for modes or preferences of zones of stimulation.

a good percentage of them do not end optimally because of less explicit strategic and tactical planning on the part of the analyst than is necessary. Orthodox analysis, by and large, frowns on such mapping out because, I think, it is governed, covertly, by too mechanistic a concept of cause and effect.

When applied to cause and effect in human behavior and to the relationship between unconscious variables and conscious ones the probability theory is likely to be a more useful model than is classical determinism.

The probability theory is entirely applicable, and with profit, to psychoanalysis. The theory of free association as a link between unconscious and conscious processes would be on a sounder basis if we explicitly stated that we expect, with a high degree of probability, that certain events will lead to certain other events progressively, or that certain presently observed phenomena have a highly probable relationship to certain historical events. Psychoanalytic theory is thereby brought up to the level of the rest of contemporary scientific methodology, and may more easily avail itself of the advantages of statistical procedures, as Chassan (1958) has recently pointed out. All statistics are, after all, predicated upon the theory of probability. In connection with certain past work that some of my colleagues and I have done (Bellak, 1956; Bellak and Smith, 1956), it has seemed entirely feasible to apply to psychoanalytic propositions the method of statistical prediction customary in all the rest of science. Meehl (1954) has discussed the general problems of clinical and statistical predictions; I, for one, see no difference whatsoever between the two forms.

Application of the probability theory to the psychoanalytic concept of motivation may have useful implications for psychoanalytic practice. It implies that the analyst may have to be more systematically active to bring about the effect that he has a right to expect to be therapeutically useful, on the basis of his general theory. I believe that it makes the concept of a rigidly followed classic procedure untenable and militates strongly for the considered introduction of parameters. In using Kurt Eissler's (1953b) term for variations in analytical technique, I wish to align myself clearly with his strict rules concerning the justification of the introduction of parameters under certain circumstances. I do not believe that the probability theory gives one a brief for wild psychoanalysis, or anything but the most careful procedure. On the other hand I do believe that realization of the shortcomings of the concept of determinism (as a case of the theory of causality of classic physics) may lead to explicitly stated variations of psychoanalytic technique.*

* If the probability theory suggests relatively more active behavior on the part of the analyst (that is, behavior designed to increase the probability of a predicted therapeutic effect), it may be entirely true that the analyst is then less of a detached observer than he used to be. The myth that he is such an observer has, I believe, been abandoned by nearly everyone. "Participant observer" is probably the most felicitous term (although undoubtedly the participation is overdone by some schools of thought because of a lack of proper theory or discipline on the analyst's part). The idea of the analyst being simultaneously optimally effective as therapist and as "scientist" is certainly a fallacious one. If the analyst is really primarily an observing scientist, he may have to forgo intervention for the sake of research. To be a therapist means to be an applied scientist, a professional with a task to perform on an already primarily established empirical basis. The technical implications of these partially conflicting roles, however, must be left for future consideration.

Some Dynamic and Economic-Energetic Aspects of the Concept of the Unconscious

Certain dynamic and energetic-economic propositions are inextricably tied up with the psychoanalytic concept of the unconscious: for instance, the beliefs that certain drives and feelings and perceptions may become unconscious after having reached consciousness, that some psychic elements may be "kept" unconscious, or that unconscious elements may become conscious, wholly, in part, or in the form of a derivative and, further, that energy exchanges are involved in these processes. Unconscious psychic elements can be cathected, and countercathexes keep them from becoming conscious. If unconscious elements become conscious, energy reallocation takes place (for example, symptom laughter). A corollary hypothesis states that the cathexes of elements of the secondary process are bound to that element while, in the primary process, idea and percept are loosely cathected, and cathexis and idea are easily separated from each other, making for the typical Alice-in-Wonderland confusion of ideas and their values. However, I shall not concern myself with these parts of theory here nor with the modes of energy, although they relate to important current propositions, notably by Hartmann (1950) and by Kris (1955), concerning neutralization and sublimation.

In a theory as closely knit and as internally consistent as Freud's theory of personality it is always difficult to discuss any part of the theory without either hopelessly losing one's specific point in a general discussion or without doing violence to it by oversimplification or excessive extrapolation. I shall attempt to solve this technical problem by presenting the nature of the general propositions in the barest outline, and then enlarge on some more relevant aspects (Bellak, in McCary, 1956).*

The Freudian model of energy can probably be characterized as a quasi-open system.† Libido itself is the system's form of energy and its cathexes in various libidinal zones, aims, and objects (and the countercathexis in the defensive system) are a fundamental part of psychoanalytic theory and practice. Each person seems to have a certain amount of energy to which the law of conservation of energy seems to apply. If libido is withdrawn from one area the psychoanalyst asks himself whither it has been diverted, or in what way reinvested, topographically and structually. We must ignore, for the moment, the fact that not only different qualities of energy are postulated, but

* See also Pumpian-Mindlin on this point elsewhere in this monograph.

† I prefer to call it a quasi-open system, because it only appears that cathexes are really placed on external objects. Actually, the investment of libido is made in the (internal) object representations. Even if someone should not agree to this point, it is obvious that cathexes are rather temporarily placed, and can be withdrawn or redistributed. The conceptualization of countercathexis, of hypercathexis of one person or one function at the cost of hypocathexis of one other person or the self (as in love) is predicated on the economy, the metabolism of a closed system; this is also true of the transformation of energy into a neutralized or sublimated form and the concept of deneutralization. The death instinct, with its conceptual relationship to the second thermodynamic law, was one possible exception to Freud's model being really a closed one (see Pumpian-Mindlin elsewhere in this monograph). An argument can be made for calling the Freudian energetic model a quasi-closed one rather than a quasi-open one; there are merits on both sides but, because I believe that it is the object representations that are cathected, I prefer to describe it as quasi-open.

also different modes of energy, such as free, lightly bound, strongly bound, sublimated, and neutralized modes in different degrees.

The concept of repression may provide us with the simplest and at the same time the most important example of dynamic and economic aspects of unconsciousness.* The physical analogy that the concept of repression suggests is that some surface object is submerged in water and that it takes some energy to submerge it and to keep it submerged: when the countercathexis is removed the repressed material comes to the surface like a cork, with concomitant disturbances in the surroundings. The submarine area corresponds (in our very simplified analogy) topographically to the unconscious, the surface to conscious mentation, following the characteristics of the primary and secondary processes, respectively.

Corresponding to the change in physical vogues, the contemporary tendency is to see defenses such as repression less in terms of hydrodynamics and more in electronic terms of computers and scanning. Linn (1954) discusses the discriminating function of the ego in these terms. He formulates the hypothesis that the ego recognizes a stimulus in two operations: first, it focuses attention on the appropriate cluster in the psychic apparatus, and then it scans the cluster for further yes-no decisions until it settles on the appropriate one. In effect, the ego matches up the presenting stimulus with a series of memories until it arrives at the one that corresponds best to the stimulus. Although Linn then discusses defects in the scanning of the cluster's individual elements in brain disturbances, we may turn to another aspect of his paper. He links the scanning operation to the motivational theory of psychoanalysis by hypothesizing that the scanning process "turns first to those elements in the cluster capable of evoking the greatest pleasure, then to those elements associated with less pleasure, and finally to those which evoke anxiety. Indeed, if an element is capable of arousing a quantity of anxiety intolerable to the individual, it may be skipped completely by the scanning process. In that case, we say the element in question has been repressed."

Linn's formulations are internally consistent and, within the current perceptual orientation of dynamic psychology, they probably have this advantage: they are at least, principally, in a form amenable to experimental verification by perceptual research. Sanford (1936) performed some of the earliest tachistoscopic experiments, showing the influences of food cathexes, on the perceptions of starved subjects. Levine, Chein, and Murphy (1943) showed that starved subjects not only saw food where there was none (as Sanford had illustrated), but they also recognized correctly food depicted tachistoscopically more often than did nonstarved subjects. In other words, their scanning was more efficient. Later, others showed that stimuli with a positive cathexis need shorter tachistoscopic exposure than stimuli without it. The recent experiments of G. Klein (1949), and C. Fisher (1954), and others have highlighted the sensitivity and intricacy of the preconscious scanning.

Linn suggests solving the economic-energetic problems of consciousness-unconsciousness by a neurophysiological model suggested by Pitts and McCul-

* For a review of Freud's varying concepts of repression, see C. Brenner, 1957.

loch (1947), wherein a volley of afferent impulses may pass a synapse depending on the intensity of the elements of the afferent impulse and the frequency with which the critical synapse is fired by simultaneous impulses from the scanning circuit. Linn (1954) hypothesizes that the intensity of the elements of a volley is a function of the cathexes of ideas.

Linn (1954) concludes primarily that brain injuries may be understood as impairments of the discriminating function because the (organic) scanning functions are disrupted. I suggest that scanning may be poorly performed on a psychogenic basis if scanning was never properly learned. In this sense, I relate scanning ability to reality testing. A child consistently exposed to the confusion of incorrect information and inconsistent reward and punishment learns to scan but poorly. From another vantage point, one might say that the child's clusters and the elements within the clusters do not have good boundary lines, are not good *Gestalten* and, therefore, are poorly scanned; that is, they are brought into imperfect relationship with the already poorly apperceived contemporary stimulus. In addition, we may remember that an overstimulated child (and the later adult) will have excessive cathexis in some elements, with a poor hierarchy of cathexis in general; ego psychology, as Holt (1956) points out, is also predicated upon a complex hierarchy of relatively stable, sublimated, and neutralized object relationships. The orderly selection of choices is also impaired in overcathexes, from a motivational standpoint (leading to acting out, for instance, or to infantile psychotic behavior).

The perceptual model of selective scanning predicated upon neuronal activity permits one to relate observed psychoanalytic phenomena of consciousness and unconsciousness to experimentally observable data of the physiological processes of visual perception and auditory stimuli.

However useful this model may be for the understanding of certain aspects of repression, it leaves much to be desired for the understanding of empirically observed and even experimentally substantiated phenomena posited by psychoanalysis. As we have previously stated, there seems little doubt that the "lifting" of a repression may cause "symptom laughter," or "symptom-crying" during analysis; no better hypothesis has replaced Freud's conceptualization of wit, humor, and the comic. If the electronic model is to maintain itself, it must accommodate these phenomena within its framework. It may be possible to relate the quasi-open energetic model of psychoanalysis to a finite number of electric elements of the nervous system and both to the interchangeability of symptoms so often observed clinically; that is, the disappearance of subjective anxiety in connection with the emergence of vegetative disturbances or the replacement of a conversion symptom by an obsession.

Quite problematical are the defense mechanisms of more complex nature than repression. As the initial step, repression probably plays a part in all defenses. As I have previously suggested, projection, for instance, involves, as the first element, the libidinal wish ("I love him," to follow the classic Schreber presentation [Freud, 1925]). The second stage, consisting of repression of this wish, is somehow transformed, in a third step, into the opposite by the mechanism of reaction formation, "I hate him." This hatred is again repressed, in a

fourth step, and is then followed by the fifth step, the ascription to the external object, "He hates me."

We can understand a good deal of the phenomenon of projection with the help of the combined apperceptive-electronic model. To be sure, there are many forms of projection that are not usually distinguished in psychoanalytic literature, but are very well described by Henry A. Murray (1951) in particular. Murray has formulated a number of hypotheses concerning projection; he very usefully differentiates between supplementary projection and complementary projection. He reserves the first term for projection of self-constituents; that is, for the distortion of external objects by one's own needs, drives, wishes, and fears. He speaks of complementary projection as the projection of what he calls figure-constituents, which he defines as: "the tendencies and qualities that characterized the figures (imaged objects) that people the subject's stream of thought and with which he interacts in fantasy. For the most part these are images of significant objects (father, mother, siblings, friends, enemies) with whom the subject has been intimately related. . . . In short, subjects are apt to ascribe self-constituents to one character (say, the hero) of the story, and figure-constituents to other characters."

In other words, Murray's concern centers primarily on the definition of subtypes of projection predicated upon the specific content of the projection. I have elsewhere (Bellak, 1950) been primarily concerned with the degree of severity or complexity or relative unconsciousness of distortion. It might be profitable to combine the two points of view.

When we then consider projection, as in the Schreber case, we have a number of processes to examine; I prefer to call the entire process from "I love you" to "You hate me" inverse projection. In comparison, the simple step (one inverse projection) is that of changing "I hate you" to "You hate me." I prefer to call this step a simple projection. In Murray's terms we deal with that often occurs as an independent process and constitutes the fifth step of supplementary projection; namely, the ascription of a subject's drive to an object.

This step can be fairly easily reconceptualized: in essence it involves a lack of differentiation between self and object. We must infer an ego regression back to that level of organization at which the self boundaries did not exist or were not firm but at which, as in the symbiotic relationship, they could, amoebalike, engulf (perceptually) external objects. Such poor scanning, Linn (1954) also points out, occurs in brain-injured patients who have difficulty in discriminating tactile stimuli applied to their own body and those applied to that of another. Of course, this supplementary projection is often amplified by complementary projection of various internalized objects, so that Flechsig, for instance, becomes a fatherlike figure (Freud, 1925).

We have already discussed the second phase of inverse projection; namely, repression. Difficulties arise when we try to understand the reversal from "I love you" to "I hate you," in accordance with the concept of perception formation. M. P. Finn (1951) has performed some experiments that support a hypothesis I have advanced in the past (Bellak, 1950); namely, that reaction

formation could be stated experimentally as follows: if a good image and a bad one are simultaneously exposed, the perceptual results will be an accentuatedly good image, modified by some aspects of the bad image (there is some return of the repressed, as in every neurotic symptom formation). This mechanism seems to hold good for the ambivalent attitude of obsessives, in whom the hostile feelings are the threatening ones and the positive feelings more egosyntonic.

In the paranoid, the wish to love and to be loved is more threatening than negative feelings. My hypothesis, as yet unsupported by experiment, is that when a paranoid is exposed, perhaps tachistoscopically, to images of homosexual subjects representing, simultaneously, friendly and unfriendly features he would see them as less friendly and more unfriendly than the general population. Unlike the obsessive, he would accentuate the negative features defensively, because they are less threatening.

This third phase of the inverse projection process "I hate him," is again repressed; hatred for the other person is unacceptable to the superego. A further regression takes place to the primary process, with a partial dissolution of the ego boundaries. What is subjective is now apperceived as objective; the former love object is now seen as hating the patient.

The above cumbersome model of a five-step process in the paranoid projection is separated principally for conceptual purposes. It is not likely that one could isolate the phase of reaction formation from the phase of subsequent repression. It is possibly an interaction rather than a sequence of phases measurable in time. It may not be impossible to demonstrate clinically some of the transitional phases in the course of paranoid development, however.

We have used projection here as an example of a defense mechanism, one of the processes by which drives, feelings, and thoughts can become unconscious by a process that itself is unconscious.

The model may be more complex than is necessary, yet it seems likely that experimental psychology, in discussing, "perceptual defense," has either chosen the relatively simplest examples (when, for instance, it relates judgments of size to value of the objects) or tends to overlook some complexities in the empirically useful and clinically valid concepts of defense formulated by Freud.

The clinical usefulness of Freud's dynamic and energetic-economic postulates concerning defensive aspects of unconscious functioning forced us to attempt to find a suitable model to integrate the empirically observed phenomena. In turn, it is likely that a better model may produce sharpened clinical observation, wider applicability of psychoanalytic propositions, and improved predictability of clinical events, especially where a bridge is needed between so-called organic phenomena, learned behavior, and subjectively experienced events.

Summary

The concept of the unconscious was discussed. It originated as a construct—an inference that Freud found useful to bridge the apparent discontinuity of waking behavior and dreams, adult and childhood behavior, and normal and pathological phenomena.

The unconscious was discussed from the standpoint of its genetic aspects, its formal characteristics, its configurational and physiological implications, and its relationship to motivational theory of psychoanalysis, as well as the dynamic and energetic-economic considerations involved in unconsciousness-consciousness.

The development of the "mental apparatus" reflects itself in its formal characteristics, in that the primary process of the unconscious is characterized by early and transitional forms of experience organization. Semantic confusion arising out of the different meanings of the word "unconscious" leads to a mistaking of the psychoanalytic propositions concerning unconscious functioning with the inaccessibility to consciousness, in principle, of some physiological processes such as neuronal activity or endocrine secretion. Patterning of experience (for instance, of imagery in the apperceptive mass) is also not accessible to consciousness per se, though the final configuration of the individual elements may become, at least, partly conscious.

The relationship of conscious activity to unconscious processes has been traditionally conceptualized in a deterministic fashion, following the classic physical concept of causality. Suggestions were made concerning the advantage of applying the probability theory to the relationship between primary and secondary process.

Finally, certain dynamic and energetic-economic propositions concerning mobility of cathesis of conscious and unconscious functioning were examined. Instead of classic physics models, taken from hydrodynamics, such as repression, electronic models of scanning interrelated with perceptual theories of motivation, *Gestalt* formation, and neuronal behavior seemed to be useful for a parsimonious interpretation of clinical phenomena, and to be consistent with certain experimental data. Complex defense mechanisms, such as projection, necessitate a breakdown into several steps, with a number of psychoanalytic propositions intervening between stimulus and response.

It is hoped that some semantic clarification, some reconceptualization of clinical psychoanalytic concepts will, in turn, be useful for experimental verification and for the extension of clinical observation of therapeutic reversibility and predictability of behavior.

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DISCUSSION OF THE PAPER

MARGARET BRENMAN (*Austen Riggs Center, Stockbridge, Mass.*): Although it may appear somewhat late to congratulate Bellak on his Introduction, I cannot forego the opportunity to do so. It seems to me that in those few paragraphs he summed up a general attitude toward the present status of the science of psychoanalysis which combines a realistic acceptance of Sigmund Freud's monumental insights with an equally realistic plea that we commence to put our conceptual house in order. Bellak is one of the lamentably few

workers in our field who has been consistently making this plea for some time. One has only to prepare a course in the research aspects of psychoanalysis to learn how few systematic statements of this kind appear in the literature. My own experience in the preparation of such a course for the candidates of the Western New England Psychoanalytic Institute, New Haven, Conn., leaves me with feelings of gratitude that as a matter of routine, I can assign Bellak's papers as required reading for all students. Quite apart from his specific contribution to this monograph, namely, further clarification of the concept of the unconscious, to which I am about to turn, there stands the very fact of the conference on which this monograph is based, which was organized by him to pursue the mapping of the conceptual jungle which is psychoanalytic theory.

Bellak's paper raises a number of central issues of such dimensions that I have decided in this initial discussion to touch on only those few that have interested me for some time. This is not to say that those problems that I shall not discuss are not, in my opinion, important; it is only to say that I shall have little to contribute to their clarification.

I shall start with Bellak's first footnote, in which he underscored the fact that the concept of the unconscious has had two different positions: first, in Freud's topographical model of the systems unconscious, preconscious, and conscious; and, second, as a quality of process that plays a significant role in the later-developed structural model of id, ego, and superego. Although it is true that everyone is aware of this historical shift, the fact remains that the relationship of the topographical to the structural model has never been really clarified. This lack of clarification is regularly reflected in theoretical discussions.

The fact that we are concerned here with the quality of a process leads me directly to Bellak's discussion of consciousness-unconsciousness as a continuum. He remarks that certain special conditions such as fatigue, sleepiness, or perceptual isolation issue from the fact that mental functioning is pushed toward the primary-process end of the continuum. Another such "special condition" is hypnosis. If I may be permitted the luxury of reporting briefly some of the data I have accumulated in collaboration with my colleague Merton Gill, I think it will become apparent that hypnosis, as a tool of experiment, has not been sufficiently exploited in connection with the very problems with which we are concerned here.

First, let me summarize some of the phenomena that occur during the induction of the hypnotic state. The hypnotist strives to reduce severely both the normal flow of sensory intake and normal motility. Whether this is done by asking a person to attend exclusively to a light, a spot, a revolving mirror, his own breath sounds, the therapist's eyes, or the sound of counting, it is clear that we are excluding the normal flow of external stimulation. Simultaneously, if the hypnotist asks him to relax, not to move, and to focus his attention on aspects of his bodily experience that are usually unnoticed, he is creating a situation that in certain significant respects is very similar to the isolation experiments. The gradual emergence of bizarre, dreamlike bodily sensations during induction (which we regard as a transitional state) and the

appearance later of hallucinated symbolic images in the established hypnotic state offer compelling evidence for the existence of the continuum of consciousness-unconsciousness.

A study of hypnotically suggested dreams also offers relevant data. Here, in a series where the simple suggestion was made "to have a dream," we found a fluid transition from the "embellished reminiscence," a thought-organization essentially secondary-process in nature, to the "static pictorial image," a product somewhat like the vague images of a daydream, through a "quasi-allegory of contrived flavor" to "quasi-dreams" and, finally, "dreams" that are scarcely distinguishable from the usual spontaneous ones. The primary process appeared increasingly in this series. A few examples will make this progression clearer:

A woman of hysterical character, given the suggestion to dream, reported the following: "I saw two of my girl friends on the porch of my home. I was there, too. I seemed to be about 15 years old. They told me they were not going to come back that evening as they had planned, but would come another time." This is a dull and rather banal response, with little or no indication of the characteristic formal aspects of unconscious functioning. This type of product is what we called "the embellished reminiscence."

Further on the continuum toward primary-process functioning stands the "static pictorial image." For example, a man being treated for torticollis reported an image of "a figure of indeterminate sex nailed to a cross, with head turned to the right and down" (the same position into which the torticollis had twisted his own head). Still another level of production is the "quasi-allegory," a hybrid form resembling the daydream, but including in a rather obvious fashion some elements of unconscious symbolism. For instance, a man suffering from ejaculatio praecox, utterly unsophisticated about unconscious symbols, produces a so-called "dream" in which he is hurrying up "some white stairs going into the sky. . . . Women are lined up on both sides of the stairs." All of them are reaching out to him, but he is "always running." He elaborates this at some length and concludes rather wistfully that at the end he is able ". . . calmly to climb the stairs, and begin intercourse calmly with one of the women—no hurry." There is a shallowness and transparency to this production that gives it a rather contrived flavor, yet the presence of the classic symbol of ascending a staircase in this naïve man links this production to the archaic night dream.

In what we have called the "quasi-dream," the product is very close to a spontaneous night dream, with the same cryptic and often surrealist quality. For example, a young woman told to "have a dream" in hypnosis reports: "I'm in a hospital bed . . . the walls are tinted pale green . . . I see the nurse's face or something . . . and it ought to startle me because her finger tips are gone . . . on the first two fingers, down to the second joint." Neither the therapist nor the patient could make anything of this dream until, in the usual manner, her associations provided the translation of a highly charged unconscious conflict, the content of which need not concern us here.

In general, the average response to the hypnotic suggestion, "You will have a dream," is a structure that seems intermediate between the normal daydream

and the spontaneous night dream, in that primary processes are used more than is common in waking thought, but less than in the normal night dream.

I offer this small sample of our hypnotic data, not only because it brings confirmation of the hypothesis that consciousness-unconsciousness lie on a continuum, but to register a strong plea for the use of hypnosis as a means to set up experimental investigations. It is one of the few techniques available to us that can bring about massive shifts in an existing equilibrium without undue threat to the experimental subject.

The point that Bellak discusses following his presentation of the genetic and formal aspects of unconscious functioning is headed "Configurational and Physiological Aspects of the Unconscious." I should say first, in passing, that his insistence on a strict separation between the lack of awareness of vegetative and neurological processes, on the one hand, and of unconscious processes as we are discussing them, on the other, seems to me to be extremely important.

With regard to his major argument on what he calls "configurational unconsciousness," either I did not fully understand him or he did not do himself justice. I hope that he will elaborate on this point in the discussion. He defines "configurational unconsciousness" as the ". . . unawareness of the blending of one experience into others to form a *Gestalt*." This seemed very good to me as long as I had the impression that Bellak meant to include here those *Gestalten* that are dynamically unconscious as well as those that are unconscious, for example, because of the fuzzy figure-ground relationships of infancy and early childhood. Then, on going back to his first footnote, I noticed that he says, "We are concerned with the quality of some processes; unconscious drives and feelings that are unconscious and that remain unconscious." At this point I began to wonder what the term "configurational unconsciousness" was meant to cover. Does it refer only to the process of *Gestalt* formation? If so, do we not then need another term for the quality that inheres in a formed *Gestalt*, dynamically unconscious, but which—in therapy, for example—becomes conscious?

As I continued to puzzle over the limits of the "configurational aspects of the unconscious," it occurred to me that the source of my confusion lay perhaps in the fact that Bellak had not spelled out a distinction between the quality of "unconsciousness" in accomplishments of conflict-free reality mastery (for example, learning to walk) and the quality of "unconsciousness" in the dynamically unconscious *Gestalt*, let us say, for example, of the circuitous aggression of the masochistic character.

It seemed to me in this connection that it would be parsimonious to use Hartmann's[1] concept of "automatization" and, more particularly, Rapaport's[2] of the development of a hierarchy of ego motivations in order to give a more clear-cut architecture to the difference between the quality of "unconsciousness" inherent in Bellak's examples of driving a car or social dancing as against that quality of unconsciousness that keeps out of awareness an impulse to murder one's father. Perhaps Bellak will explain wherein I have failed to understand him on this point.

The next issue I shall touch on briefly is the first raised by Bellak in his fourth major section, entitled "The Unconscious in Relation to Motivational Theory." He says, very charitably I think, that it needs little more than a reminder to underscore the fact that psychoanalytic theory does not restrict its concept of motivation to the concept of the id, that is, the instincts or drives. While it is undoubtedly true that when the issue is sharply raised most workers in the field will agree that ego and superego forces may also motivate behavior, the fact remains that it is usually not sharply raised, with the result that many theoretical discussions vaguely imply, first, that the only "real" motivational force is that derived from instincts and drives and, second, that the latter are to be considered as having the quality of "unconsciousness" within a psychological frame of reference. Bellak deals succinctly with this second point as follows: "Unconscious, in the psychoanalytic sense, may be the aims, nature of objects, or the motives for modes or preferences of zones of stimulation" (as against the drives themselves).

I seriously doubt that conceptual order can be made at present in the psychoanalytic theory of motivation without recourse to some variant of Rapaport's suggestion of a hierarchy of controlling organizations in the human psyche.[3] Without this, the problems of the so-called "drive-derivatives," the defenses, and even the relatively automatized functions of adaptation, all stand marooned and in no systematic relation to each other.

I shall now consider the question of the defenses. Bellak comments on the fact that the defenses of a more complex nature than repression are "quite problematical." This puts it mildly. Several years ago, Robert Waelder,[4] discussing the structure of paranoid ideas, found himself so mired in the morass of inconsistent discussion of the defenses that he registered an eloquent plea for the development of what he called "an alphabet of defense mechanisms, a catalogue of elementary responses." He pointed to the fact that phenomena of varying degrees of complexity, and related to quite different levels of functioning, are all labeled "defenses." This state of affairs stems in part from the history of the concept. It will be recalled that Anna Freud in *The Ego and the Mechanisms of Defence*[5] listed the following nine mechanisms of defense: regression, repression, reaction-formation, isolation, undoing, projection, introjection, turning against the self, and reversal; also, as a "normal" defense, sublimation. This obviously heterogeneous collection has provided the starting point for all later discussion. Anna Freud recognized the inadequacy of this listing and made an attempt to classify the defenses in terms of the order of their appearance in genetic development. She apparently gave this effort up as a bad job and, insofar as I know, has not returned to the problem.

The small effort I have made to solve this problem has again led me back to the conviction that here, too, we are in a blind alley unless we first set up a conceptual hierarchy of controlling organizations, some closer, some farther, from drives. In addition to this, I believe we shall have to systematize a type of consideration that I tentatively advanced in a discussion of the nature of masochism.[6] My explorations of the existing literature on this topic brought home very sharply the urgent need for conceptual renovation. I found, for

example, that different authorities, each renowned, variously consider masochism as "an instinct," as a "partial instinct," as a "defense mechanism" or, again, as a "superego expression." I believe that these apparently irreconcilable contradictions issue from the vain effort to reduce a complex configuration (which may well contain all of these elements) to a function of one or another of the three psychic institutions: id, ego, or superego. This mechanical structuralism does great violence to any clinically observed phenomenon that is of the same order of complexity as is the phenomenon of masochism.

It is hard to know at what point it would be best to attack the problem of conceptual order in the defense mechanisms. I am inclined to think that probably the effort to make fine distinctions within any given defense (as Bellak does with the mechanism of projection) is not the best starting point. In my opinion this would become an easier task if it were deferred until some over-all inclusive scheme were devised that theoretically has a place for all the defense mechanisms and would exclude, by its very structure, the possibility of drawing into itself complex psychic configurations that are not simply defenses. This is easier said than done, as I can attest from personal experience. Nonetheless, it is at least conceivable.

Before I close, I should like to address a final question to Bellak with regard to some of the therapeutic implications of his paper. At first he says, somewhat pessimistically, I thought, that "Psychoanalysis as a therapeutic model is, after all, largely predicated upon the proposition that configurations of experience can be 'analyzed' or, in other words, reduced to their component parts . . . In this sense the accessibility of certain materials and the reversibility of the learning process is one of the crucial problems in psychoanalysis, posing its therapeutic limitations."

Later on, in another context, he says: "Luckily for therapeutic success, restructuration need not be more conscious a process than the original emergence into neurotic configurations. The patient need not be able to leave the analytic couch prepared to deliver a dissertation on his psychoanalytic development . . . ." This second statement is the one to which I subscribe, and I hope Bellak will clarify for us how these two statements are related.

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BELLAK: Margaret Brenman is quietly making a contribution by pointing out certain transitional phenomena between primary and secondary processes. She labels them "the embellished reminiscence, the static pictorial image, and

the quasi-dream." It would be interesting to collect as many transitional forms of consciousness and unconsciousness as possible. We have been speaking of a continuum in many respects in discussing performance of projective techniques. Both Schaefer[1] and I,[2] independently and virtually in the same month, published our considerations of a continuum, from problem solving and purposive behavior to fantasy, projective tests, preconscious fantasy and hypnagogue phenomena.

I owe Brenman an apology for a typographical omission and an error in the footnote to which she refers, which should have read: "We are concerned with the quality of some processes, unconscious drives, and feelings which are unconscious and *which may or may not* remain unconscious." I did not mean to say that they necessarily remain unconscious. Somewhere else in the manuscript the same typographical error was not made, and I did say that they *may or may not* remain unconscious, that, in fact, we are much concerned with the conditions under which they may become conscious or remain unconscious.

More serious is Brenman's question concerning what I mean by "configurational unconsciousness" and when it can become conscious and when not. I think I can answer that question schematically and systematically. Configurational processes are always unconscious in principle and not accessible to consciousness. To be more precise, I might have to speak of the "unconscious process of *Gestalt* formation" as being, in principle, inaccessible to consciousness. Usually the end result of that process, the configuration itself, is accessible to consciousness in principle. Certain types of configurational unconsciousness, for instance, those *Gestalten* of genetically early and perceptually fuzzy nature, can be inferred but not made conscious. This may often constitute a principally unanalyzable residue that, clinically, is often wrongly considered a form of repression and resistance.

Finally, many forms of configurational unconsciousness can be made conscious and reconstituted, and these forms of configurational unconsciousness are the bases of psychotherapy and psychoanalysis. I shall define briefly the process of interpretation as the pointing out of common denominators of behavioral patterns in our apperceptive distortion, and insight on the part of the patient as the seeing of common denominators in his apperceptive distortions. Once these are seen we can start reconstituting them; the process of unconscious *Gestalt* formation, of configurational unconsciousness, of the merging of figures, is of course reversible, or else therapy would be impossible. I think that a hierarchy of organization may be a fine idea, but one can start from dozens of different aspects of psychoanalysis in trying to put the house in order. However, I think we must agree on our preliminary definitions before we can put them into a hierarchical system.

Speaking of Brenman's example of masochism, I suppose one could consider it metapsychologically and then say something about it from such standpoints as genetics, dynamics, economics, and defense, rather than merely from one viewpoint. Most definitely I must address myself to Brenman's final question as to how I reconcile my statement that psychoanalysis is a therapeutic method predicated upon making reversible certain *Gestalt* formations with my

other statement that the patient need not leave the couch prepared to deliver a dissertation on what ails him. I am rather surprised at this question, because the relationship seemed easily understandable: the first proposition is that some processes cannot be reversed; the second says that in those where reversal is possible and the content-components of the *Gestalt* become conscious, the process of restructuration, in all its conceptual ramifications, need not be conscious or within the patient's conceptual grasp. There is absolutely no mutually exclusive relationship between the two statements.

To amplify: one aspect of therapeutic pessimism relates to the fact that we are unable to recover something that was never present; one cannot very well expect to make conscious unformed perceptions as well-defined perceptions. Other configurations are formed from parts that were themselves clearly defined. What we cannot expect is the ability of the patient to make conscious the process of *Gestalt* formation; for example, the fact that his contemporary image of a woman has resulted from a variety of experiences with different people at different times. The reconstruction of the experiences by which the parts presumably went to make up the whole must remain an inference. What we can and do make conscious, with therapeutic success, is the relation of certain features of the neurotic apperception, the end result of the configurational process, the composite picture itself, to certain historical events. The restructuration of these various recovered memories into the new, non-neurotic apperception takes place again by an unconscious configurational process. The patient is usually unaware of all the internal changes and will have some unconscious "transfer of training" and find improvement in areas never discussed by themselves, but related to the common denominator that was successfully analyzed.

When I remarked that the limited reversibility of some learning experiences explains some of the limitations of psychoanalysis I meant that some configurations cannot be successfully reduced to historical component parts because they were obscure (for example, preverbal or overdetermined) or because some memories retain such a decisive organizing effect, have been so thoroughly learned, or have such firm engrams that the present technique of classic psychoanalysis (that is, making the component parts conscious) does not suffice to make them reversible. It is possible that some day certain auxiliary techniques may be devised to enable us to deal with some of these particularly stubborn problems. "Reliving," *à la* Ferenczy and Sechehay,[3] constitutes an attempt in this direction (albeit of very limited usefulness) for use in severely regressed schizophrenics, for example. "Fractionated analysis," with "dispersal of training," is becoming more popular without having been given an explicit name as yet; the process simply manifests itself in the higher frequency of second and third analysis. In the long run the interruption of analysis for a year or more may become a specific tool for dealing with personality components that are particularly difficult to reverse.

To answer another point that has been raised by Brenman, I do not think that we require a special term for all *Gestalten* that are "process" unconscious and thus beyond the ordinary domain of psychoanalysis. I am content to

retain a general concept of the unconscious, eliminating from it the special types of unconsciousness that I have mentioned.

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Kubie: I fear I shall be very troublesome about this whole problem. I am unable to list the number of internal contradictions that I find in this particular approach to the problem of conscious, preconscious, and unconscious. I think that, until we clarify our basic approach to the problem, we shall invent new words but not new concepts, and that these new words will be overlapping, redundant, and contradictory. Furthermore, the effort to clarify these contradictions and redundancies will only involve us in new ones. I think that we must make a fresh attack on this problem. I have the temerity to present, very briefly, what seems to me at least a reasonably fresh approach.

There is considerable evidence, subject to possible experimental demonstration, that all processing is neither conscious nor unconscious but preconscious, and that the great neglected element in psychoanalytic thinking is preconscious processing. The preconscious processing is "pre" in every sense: it is preceding in development and preceding in terms of the complexity of organization. We grow up preconsciously and we regress preconsciously; we get sick and we get well preconsciously. The preconscious stream is an incessant and enormously rapid turmoil of processing that depends, not upon symbolic processes fully developed, but upon something that the communications engineers call coded signals. It is impossible to go into details here, but there is a very important difference: the code is primitive and limited, and its relationships are more fixed and much more precise, much less allegorical or analogical than the subconscious.

What, then, of consciousness? Freud himself gave a lead that has been neglected. He said almost accurately, and yet inaccurately, that consciousness was like an internal perception, a perceptual process. That is not exact, but it implies a sampling process. We are constantly sampling this incessant preconscious stream, both in the process of the internal thinking of rumination and of communication. We sample it by the process of organized, fully developed symbolic representation of fragments. How the fragments are chosen and how the affective elements influence the choosing of the sampling and the clustering of the samples and the frequency of repetition of samplings all become a matter of psychophysiology and of neurophysiology; but of this incessant sampling of the preconscious stream, a small fragment, an extremely small fragment, is what we call consciousness.

We know also that the symbolic representation by which this sampling is done is subject to distortion by the process that we call repression. However, what is it that becomes unconscious? It is not the symbol. We still have

symbols, whether in dreams or in symptoms. It is the relationship that becomes unconscious, the relationship between the symbol and the fragment of the preconscious stream that one may call the internalized representation of external events. It is the relationship between the fragment of the preconscious stream and the symbol that has become either distorted or severed or lost during the process that we call repression and by which psychogenic unconsciousness is achieved.

One word more. How, then, can I relate this to differences between psychogenic and organic alterations of levels of consciousness, levels of organization, and levels of activity? In the first place, obviously, if the sampling of the preconscious stream depends upon a symbolic process, anything that alters the capacity or the precision of symbolic processing will alter our conscious thinking: whether it is a diffuse injury that disturbs all symbolic processes in general, such as a blow on the head, a concussion, or something equally violent, or whether it is a localized injury that temporarily or permanently deprives us of our capacity to use certain types of symbols.

What can alter the preconscious stream is a much more fundamental and basic question. I believe that the essential distinction between organic coma and psychogenic alterations in levels of consciousness, such as the difference between organic coma and sleep, is that in sleep the preconscious stream continues uninterrupted or practically unaltered, whereas in organic coma preconscious processing is reduced or interrupted. We do not have the mechanisms by which to measure this, but we do know that the symbolic representation of what goes on, the symbolic sampling of the preconscious stream, is altered in sleep. Psychogenic processes alter only the sampling of the preconscious stream and the relationship between the symbol and what it represents in that sampling process. On the other hand, the organic alterations of consciousness alter both the preconscious stream itself and the focal or diffuse capacity of the cortex to sample this internal preconscious processing.

The implications of this hypothesis (it is obviously only a hypothesis) for our psychoanalytic terminology are many; indeed, far too many for us to consider here. It would make it impossible to use certain terms that occur frequently, not only in Bellak's paper, but throughout the analytic literature on unconscious ideation. To speak of a conscious-unconscious continuum becomes something that must be rephrased carefully.

I cannot go into all the implications in question, but I have the temerity to present the hypothesis here because I think that, unless we approach this problem from alternative hypotheses, we shall not clarify our thinking about it.

WOLFENSTEIN: I cannot say that I agree with what I understood Brenman to say about the usefulness of the concepts ego, id, and superego in trying to clarify masochism, for example. Bellak did not use these terms in connection with projection. There is a frequent statement in connection with analytic practice that the analyst must be aware at every moment of the interrelations of ego, id, and superego, and there is a good deal of pious nodding to such a statement; however, when a particular case is discussed and the question of just what is happening is raised, I think that it does not turn out to be useful or meaningful. To take an example very briefly, in the case of the young

girl who was afraid of possible sexual experiences. The question was raised as to whether the fear was attributable to instinct or to the superego? Obviously, the one alternative does not exclude the other but, from the point of view of the analyst, it would be a question of such factors as the subject's fantasies. I do not know whether reference to the id or the superego is very helpful in such circumstances.

I am in strong agreement with the proposal to describe all observed defenses. Waelder,[1] Bellak, and Brenman have called for this, and I suggest that this could be done along the lines laid out by Bellak; namely, with a description of the various kinds of projection. Bellak has referred to processes as diverse as the small child's fantasy that his mother will eat him if he wants to eat her and the complications of Schreber's paranoid ideas.

The question that Brenman raises concerning which of these phenomena are defenses and which are more than defenses seems to me a merely verbal question depending solely on the definition of defense. We have a range of maneuvers of which human nature is capable and questions concerning the similarities or the dissimilarities among them are empirical questions. I strongly oppose Brenman's proposal to have a systematic and abstract scheme as a precondition for a redescription of all the mechanisms of defense, or a description of those not properly described, or the differentiation of those put under a common label. I think the same limitation applies here as to what she says about trying to fit the ego, id, and superego concepts onto everything. In connection with masochism, how can we know what variables we need until we have described the phenomena?

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OSTOW: Like most of us, I have enjoyed Bellak's presentation and his attempt to clarify our thinking. However, in such attempts we often discover what we know, what we think we know and, most important, what we do not know. At this point I can contribute only a few details. In the first place, in discussing the genetic aspect of the unconscious, Bellak defines the unconscious as derived entirely from the experience of the individual; that is, nothing is unconscious that was not at one time conscious. That may well be true, and I do not want to dispute it at this point, but that is not what Freud said. What Freud did say, was that much of the unconscious was once conscious, but he considered as the most important part of the unconscious something that was never conscious; namely, inherited patterns, images of instinctual objects, instinctual technique, and the anatomical contact apparatus. These inherited images form the basis of universal symbolism. We should remember that Freud believed even that the unconscious contains memories of historical events that occurred thousands of years ago. I think that a complete statement should include this belief of Freud, whether or not we all consider it acceptable today. Freud was no less aware of the difficulty of assuming the inheritance of acquired characteristics than we are.

Are drives themselves susceptible to perception? Can one become conscious of them, or are they intrinsically invisible? If one considers a drive as a process, then one must assume that a process in the central nervous system is invisible most of the time. However, suppose we consider a drive not as a process or an act, as has been done earlier in this monograph, but a tendency or a wish. Is a wish susceptible of consciousness? Is it, too, invisible? I think it is visible and, in that sense, perhaps drives may become conscious and. therefore, legitimately a part of the unconscious that was once conscious.

My third remark concerns the development of the electronic model. My own feeling about it (here I suppose Kubie will take issue with me) is that the relation between cathexis on the one hand and the frequency and intensity volleys is extremely premature; our knowledge of neurophysiology at the present time is altogether inadequate to attempt any such direct correlation with psychic concepts. Freud[1] attempted this in 1895 on the basis of a neuron theory, and he quickly realized that he was neurologizing, that he was translating the concept "idea" to the concept of "neuron," and he discarded it.

Although we know a good deal more about neurophysiology now than did Freud and his contemporaries, still I think the gap between what we know about it and what we must know to make proper correlation is really a tremendous one and one that we should not hurry to make. In my opinion this is an example of using a model merely because it happens to be available and not because it explains more or because it explains better.

Reference

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Kubie: I think that Ostow's implication is unintentionally misleading. No one would pretend that anything that we know about electronic computers would explain differences between conscious, preconscious, and unconscious, but there are many new types of variables of which one is now aware. The electronic model beautifully illustrates the clustering of impulses and such factors as the frequencies and the modulation of these frequencies in patterns. These analogies, however, simply open up our minds to new and exciting possibilities that make this strange, mysterious relationship between a constant preconscious stream influencing and influenced by the samples that are taken from it, and make this relation available to exploratory thought and to investigation. In this sense a model used in such a manner is a working hypothesis, as every model should be a working hypothesis simply and graphically visualized.

Leites: I address myself to just one point in connection with what Bellak calls "probability theory." I should like to schematize the situation, and again I may be wrong since I am insufficiently familiar with the present situation in physics. In classic physics we postulate an initial situation, and we have a general proposition of the form, if A, then B, which enables us to predict what the terminal situation will be. The terminal situation will take place in all cases.

Toward the end of the first quarter of this century, a new propositional structure developed to the effect that, given an initial situation, only the probabilities of various terminal situations can be predicted.

The immediate reaction to this on the part of the classic physicist was to seek those subcategories of the initial situation, I, I′, I″ and so on, which will have the following characteristics: that wherever there is the initial situation I′ there will be the terminal situation T′, and wherever I″ exists there will be the terminal situation T″ and so on.

As a rejoinder to this came the famous principle of indeterminacy of Heisenberg, the content of which is entirely beyond me, but the general structure of which seems to be the following: there are good reasons for which it seems impossible (I am uncertain as to whether this is the correct word) that we shall be able to construct invariable relationships between such factors as I′ and T′, and I″ and T″. This was widely accepted, but not universally. I understand that an old recalcitrant named Einstein did not accept it up to the end of his life, but predicted that if we sought long enough we should find invariant relationships.

Where is the similarity in psychoanalysis? It seems to me to be nonexistent. We have no table of defense mechanisms, and we have not even seriously approached the question of choice of mechanism. Of course, here and there certain propositions have been made, but unless I am incorrectly informed, our knowledge of the choice of defense mechanisms is very incomplete. Of course, it would be necessary to subdivide projection into P-1 to P-17. What are the conditions that increase the probability of the adoption of P-8 as against P-9? We have nothing of the sort; and, until we have, how dare we say, how dare we even consider the construction of an analogy to Heisenberg's principle that there are reasons for the impossibility of constructing invariant relationships?

Szasz: I wish to offer one comment, chiefly with the object of bringing the discussion back to psychology, about which I think we know more than we do about physics.

My impression is that the concepts which the terms "conscious," "preconscious," and "unconscious" denote are not as homogeneous or as definite as we have become accustomed to believe, and I think that this itself touches a little on some of the things that Kubie has suggested. Specifically, the words "conscious" or "consciousness" can refer, and usually do refer, to experience. A person can say that he is conscious of something. This might be true for the preconscious and unconscious, but is not usually the case. The terms "preconscious" and "unconscious" tend to refer, instead, to something that we are trying to find, such as a memory or the name of something. In such a case we know that we have (possess) the idea or concept, but we are unable to verbalize it. Hence, if the term "conscious" refers to experience, while the terms "preconscious" and "unconscious" do not, the latter two terms belong in a category different from that of the first. Now, while the former concept constitutes a kind of primary datum (experience), the latter two denote what is best described as a *theory of the observer*. Of course, the observer might be a part of the self (the "observing ego"). If this is true, the notion of the un-

conscious is analogous, to some degree, with the benzene ring in chemical theory. The point of this argument is that, just as we cannot expect a benzene molecule to make a contribution to chemical theory, we cannot expect the unconscious to verify or disprove our psychoanalytic constructs. It is the place of the *observer* (that is, the scientist) to perform this function. I think that the concept of the racial unconscious falls in the same category; it is not to be expected that the patient can make any contribution to it. Personally, I do not like this idea of the racial unconscious, and doubt that it could be verified. However, if we think it can be, we should have to determine how we are going to do so. This touches on the basic aims of this monograph.

SANFORD: My opinions in these matters are largely in accord with what Kubie said about the importance of the preconscious. I should like to begin with a comment on the idea of the continuum between the unconscious and the conscious as described by Bellak. It seems to me that we must have a scheme that will explain consciousness as well as unconsciousness, and that we also must see both consciousness and unconsciousness as somehow playing roles in the adaptive needs of the organism. I take it that consciousness is very important and helpful in furthering the aims of living and growing and being one's self, as Bellak pointed out in the case of making things automatic versus heightened awareness when we have a problem to solve.

As Kubie has pointed out, when development has begun we have in the nature of preconscious things a great variety of processes that we can conceive as resources and that we call upon and bring into our consciousness when we are dealing with a problem. After the solution has been achieved these things presumably recede into the preconscious. I suggest that the notion of the continuum applies very well to the relationship between this preconscious and the conscious. We can see the different degrees of qualities such as accessibility, availability, necessity, and appropriateness. This agrees very well, I think, with the notion of the continuum. I also suggest that the examples given by Brenman were of this sort. If we have a problem and we are not functioning well, we shall once again get an increase in these less adaptive kinds of ideas or symbols or processes. Once again the idea of the continuum fits very well, but it seems to me that the unconscious, in the sense of that which is forcibly prevented from becoming conscious, is of a rather different order of things. The concept of the continuum does not fit so well here, so we rather need, I think, the concept of a system that is relatively well bounded or separated from the rest of the personality and does not enter into any kind of integration with the rest of the personality or into consciousness short of some radical change in the whole structure. This, I think, is frequently an all-or-nothing proposition rather than a continuum.

By the way, concerning Bellak's use of the quasi-open system, I think we should investigate this a little further. It seems to me that if we use the word system we must conceive of the boundary surrounding that system. It has been said that a system is all of anything. I think a more sophisticated definition is that a system is simply a set of related variables. In any case it must have a boundary. The "openness" or "closedness" of the system, I take it,

refers to the degree of permeability of that boundary or what it takes for energy to pass from inside the system to outside the system or vice versa and, ordinarily, we conceive of the boundary as something that requires a transformation in the form of the energy as it passes across it.

If you think of the kind of tendency or system in the personality that is forcibly prevented from being conscious, it seems to me the main thing to say about it, the thing that is most impressive, is that it is out of communication with other processes in the personality, and it is this out-of-communication state of affairs that we see expressed in the rigidity of behavior that is determined by unconscious processes. This, I believe, would be one distinction that is probably worth making in trying to arrive at a conceptualization of the unconscious in the sense of things forcibly kept from consciousness and unconsciousness in the sense of things that are not needed, as it were, in the adaptive processes of the organism.

BELLAK: I shall consider the last comment first. I think Sanford's statements were predicated on a misconception. When we speak of an open or closed system in this context, we do not mean "intrapersonal" but "interpersonal." If I understood Sanford correctly, he spoke about intrapersonal boundaries and their nature and permeability. However, that is not what I had in mind, and I do not believe that that is what one usually has in mind in this context.

SANFORD: These terms have no common meaning, as was suggested earlier.

BELLAK: I think that Pumpian-Mindlin and I, at least, and perhaps most of the other contributors to this monograph, think that these terms do have a common meaning for them, namely, that a system relates to the individual, and that cathexis goes outside and that there is a sum total in one person that stays the same in essence. That is why I stressed the point of the cathexis of the intrapsychic representation of an actual object.

SANFORD: This is rather important, I think, if we are going to think in terms of a system, and everyone does so, more or less. Of course, I think it is necessary to have conceptualizations, and I think this system is quite common and quite well used; but the basic thing about any system in the universe except the universe itself is that it is divisible into other systems. If you wish to think of an individual as an enclosed system, it seems to me you are almost bound to conceive of the subsystem which, in his organization, constitutes the personality. If you are going to think of a group as a system, you must also think of the persons constituting that group as individual systems, and your relationships are transactions among the systems and transformations in the systems due to their interaction on each other.

BELLAK: I agree with Sanford in part; regrettably, however, I must turn to other points that have been raised. Sometimes, indeed, such a discussion reminds me of the story of the schoolboy who was facing an oral examination in biology. Unfortunately, he had been able to prepare himself only on the classification of worms. His teacher however, saw fit to question him about the biology of the elephant. The resourceful youngster responded as follows: "The elephant is a very large animal. It has big ears, four big legs, and a big trunk.

The trunk looks like a worm, and worms are subdivided into the following classifications. . . ."

Kubie has made some valuable contributions with his conceptions of the preconscious, the emphasis on the importance of the preconscious stream and, particularly, on the nature of the sampling process. However, I see no advantage in substituting preconsciousness for unconsciousness. Where Kubie alluded briefly to unconsciousness I still felt quite strongly that there was a need for formal conceptualization of the unconscious. When he says that the relationship between the symbol and the preconscious stream becomes unconscious I think that he refers to the process that I call *Gestalt* formation or configurational unconsciousness. Otherwise I believe that he overemphasizes the preconscious—perhaps because it has been neglected—to the degree that he has insufficient patience with the traditional concepts of conscious and unconscious. He appears to ignore the accepted definition of the preconscious as "material that is not conscious but that is easily made conscious," for example, by effort and training in introspection, as by Varendonck,[1] Titchener,[2] and others.

I know of no evidence that suggests that the stream that Kubie apparently has in mind could easily be made conscious; most of it takes place in the realm of unconsciousness. If Kubie wishes to refer to the lack of awareness of the relationship between stream and symbol, the literature suggests (Jacobson,[3] for example) that unawareness of preconscious fragments of the stream be termed "denial," with the word repression being reserved for the process of making unconscious the connection between manifest and latent material.

I am surprised at Kubie's objection to a continuum, since we are dealing with relative unawareness, except in the unawareness of physiological processes. Here I must address myself as much to Sanford as to Kubie. Very often we can observe a continuum clinically. For instance, a patient may begin with a guided fantasy, then go into a daydream and a preconscious fantasy that has an almost autonomous life, and from there go into a real dream. Often one can show the relationship between real perception, fantasy, daydream, preconscious fantasy, hypnagogue phenomena, and dream, and it is a gradual transition, not a sudden change. The same process of transition can be observed from reality to dream, to delusion and, finally, to hallucination.

Wolfenstein's remarks were addressed principally to Brenman, so I shall not comment on them. I think that I largely agree with her. In reply to Ostow, I believe that I have already stated that drives and the developmental matrix are unconscious without ever being conscious; they are "process unconscious." The wish is the representation of the drive, not the drive.

As to the neurophysiologic model:from what I remember about problems of audition I find a good deal of support for the volley theory. All I shall say here is that if the volley theory should happen to help us understand, predict, and control clinically observed phenomena, it is good; if it does not, let us reject it. There was some recent reference to an investigation of the muscles of the grasshopper. Apparently when these muscles get many volleys the insect jumps higher; when they get but a few volleys, it does not jump as high.

Incidentally, the grasshopper has built-in gears, so that when the volleys come really hard and fast, another system takes over. This appears to supply some confirmation for the volley theory.

With regard to Leites: I have heard of the Heisenbergian uncertainty principle, but that is not what I meant. In fact, I thought I made it clear that this was not what I meant: I thought of Nagel[4] (whose paper is on social and psychological science) in mentioning the probability theory as the basis for statistical procedures. Such procedures are necessary for the examination of psychological behavior, not only for the academic psychologist but also, I believe, for the psychoanalyst. Virtually all I know about probability theory comes from that paper, which simply says that the best we can say is that certain events have a certain probability of occurring. Statistics is a way of trying to measure the probability with which events presumably will occur; and, very briefly, I think that some such system can be applied to analytic thinking.

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THE STRUCTURAL MODEL: EGO, ID, AND SUPEREGO

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The Concept of Ego Before the Structural Hypothesis

The term "ego" (*das Ich*) as a designation of a psychic entity, was not coined by Freud. It had been in use by philosophers, psychologists, and psychiatrists before Freud's time. It appears in Freud's early writings without formal definition, denoting the psychic apparatus in general, but especially that part of the psychic apparatus that is not unconscious. In the first decade of psychoanalysis, Freud's chief concern was to establish the concept of unconscious ideas and to investigate their properties. When the need to refer to structure arose he proposed the existence of systems of ideas or psychic institutions that contain these ideas. For example, the unconscious (Ucs) is a psychic institution that contains unconscious ideas; the preconscious (Pcs) is a psychic institution that contains ideas which may become conscious; and consciousness (Pcpt-Cs) is an institution which perceives, in which percepts (Pcpt) or memory images are currently conscious (Freud, 1900).

In *Studies on Hysteria*, published in 1893, one finds the phrase "the dominant mass of ideas constituting the ego." At least part of this ego has the quality of consciousness. Some memories or thoughts may be "introduced" into the ego while others must be "excluded." The latter are "incompatible" with the ego, and therefore the ego "represses" them or "defends" itself against them. Two or more ego functions may proceed simultaneously, giving the effect of a "double ego." In disease the ego may be "overwhelmed" and part of it may be "split off" by the disease process.

In his letters to Fliess, published posthumously (1954), Freud used the term "ego" in essentially the same way. The only significant innovation is the association of the ego with the preconscious. "Pc (preconsciousness)", he says, "is the third transcription, attached to verbal images and corresponding to the official ego." In his *Project for a Scientific Psychology*, written in 1895 but unpublished during his lifetime, Freud offers a formal definition of ego: "... an organization has been formed in Ψ whose presence interferes with the passage (of quantities) if that passage occurred for the first time in a particular manner (*i.e.*, if it was accompanied by satisfaction or pain). This organization is called the 'ego.' It can easily be pictured if we consider that the constantly repeated reception of endogenous quantities in certain neurones (of the nucleus) and the consequent facilitating effects of that repeated reception will produce a group of neurones which retains a constant cathexis and which thus constitutes the vehicle for the store of quantity required by the secondary function." In this definition, Freud considers the ego to be a definite psychic organization whose function it is to influence subsequent psychic events by retaining some of the psychic energy which passes through it. He lists the following properties of this ego: the experience of satisfaction, the capacity for motor discharge, the capacity to create and avoid hallucina-

tions, the power of attention, and the tendency to accumulate, discharge, and transfer psychic energy (quantity). The cathectic level of the ego may rise or sink. These ideas, while they anticipate certain definitive positions taken by Freud later, should not be interpolated into the sequence of his published ideas since they were not meant to be published.

In the *Interpretation of Dreams* (1900), Freud compares the "gulf between the unconscious and the conscious" to that "between the repressed and the ego." In an essay on the same subject, published one year later, Freud (1901) gives a formal definition of the ego: "A psychical agency has come into being, which, taught by experience of life, exercises a dominating and inhibiting influence upon mental impulses and maintains that influence with jealous severity, and which, owing to its relation to consciousness and to voluntary movement, is armed with the strongest instruments of psychical power. A portion of the impulses of childhood has been suppressed by this agency as being useless to life, and any thought-material derived from these impulses is in a state of repression." In a footnote to the 1900 work added in 1911, Freud says that during dreaming the conscious ego is concentrated on the wish to sleep and provides the dream censorship. A footnote added in 1914 suggests that the conscious ego contributes the secondary revision of the dream.

In 1910 (a) Freud observed that the ego may use anxiety as a weapon in its struggle against repressed wishes. In the same year (1910b) and also in 1912 he speaks of "ego instincts" as a set of instincts that aim at self-preservation in contradistinction to instincts that aim at the attainment of sexual pleasure. In 1911 the term "reality principle" appears. During the course of its ontogenetic development the ego changes from a "pleasure ego" to a "reality ego." It becomes concerned with the circumstances of the outer world and it exerts itself to alter them. It can become conscious of external reality, it can attend to interesting percepts, it can note, remember, and pass judgment on external events, it can act, and it can anticipate action by thought. It strives for what is useful rather than for what is pleasurable and guards itself against damage.

In his paper *On Narcissism* (1914), Freud relates the function of the ego to the psychic energy available to it. In its state of primary (original, infantile) narcissism, the libido of the ego (that is, its potential to strive for erotic gratification) is concentrated within itself. In the course of maturation the ego seeks external objects; it invests the intrapsychic images of these objects with libido that is diverted from itself. When an individual loves another his ego libido is depleted in favor of object libido. When he is ill or wishes to sleep the libido reverts to the ego. If there is a pathologically intense concentration of libido within the ego, hypochondria or infantile megalomania ensues. In the same paper, Freud introduces the notion of an ego ideal, namely, an image of the self idealized according to the standards of the child's parents. This idealized image of the self offers itself as an object for love in competition with images of external objects and, by retaining some libido, generally prevents complete exhaustion of ego libido in favor of object libido. This is an early formulation of the superego concept; I shall return to it later in our consideration of the superego. It is interesting that Freud set down

for publication this idea of a relation between ego function and ego energy almost twenty years after he first contemplated describing ego function in terms of energy in the then-unpublished *Project for a Scientific Psychology*.

In his metapsychological papers of 1915 and 1917, Freud attempted to devise a psychology based on the behavior of the three systems Cs, Pcs, and Ucs. There is no development of the concept or function of the ego as such. In *Beyond the Pleasure Principle* (1920) Freud speaks of a "coherent ego" whose interests conflict with those of "the repressed." The nucleus of the ego is unconscious, while the preconscious is only a small part of the ego. Moreover, "the ego is the true and original reservoir of libido." At this point Freud developed the structural hypothesis. First, the ego ideal or superego was identified and distinguished from the rest of the ego. This step was taken in the paper *On Narcissism* (1914) and elaborated in the monograph *Group Psychology and the Analysis of the Ego* (1921). Second, in *The Ego and the Id* (1923) the ego was demarcated from the unconscious and the repressed. What had previously been called the unconscious and the repressed was now conceived as a definitive structure to which Freud gave the name "id" (*das Es*). For convenience of exposition, I shall take up the latter distinction first.

The Problem of Conflict

In neurosis one sees a psychic process that in normal life is invisible. The manifestations of neurosis are all derived from the struggle of an instinctual force to achieve expression against the opposition of a restraining force. In the course of normal psychic development some instinctual forces are permitted access to conscious intention and to execution, while others are permanently denied this access. We see only the resultant behavior and almost no evidence of a conflict of forces. In neurosis, the containing forces do not restrain completely the upward striving forces, and the struggle is acted out dramatically in the patient's symptoms. Freud made this observation and proceeded to construct a psychological theory to describe and account for it. The specific problem which we shall consider is, what are these contending forces?

In Freud's earliest writings (1893), as we have seen, the restraining or excluding forces were attributed to the ego, while the striving forces were called incompatible or pathogenic thoughts or memories. Exclusion by the ego was called "repression" or "defense." In the *Interpretation of Dreams*, wish impulses of the Ucs struggling toward the Pcs are intercepted and turned back by a censorship at the boundary. In the metapsychological studies, written about fifteen years later, the formulation is similar. The concept of the generation of an anticathexis (that is, a force created *ad hoc* to oppose the emergence of a repressed impulse), mentioned in the earlier work (1900), is elaborated in 1915 as one of the chief mechanisms of both primal and secondary repression.

Even though Freud did not revise this formulation until 1923, he was aware of its shortcomings almost from the outset. In the 1895 "Project" (1954) Freud notes that hysterical symptoms are partly determined by symbolization, a primary process that applies only to unconscious thoughts. "What we need

to explain," he says, "is how an ego-process can be accompanied by consequences which we are accustomed to meet with only in primary processes." In the *Interpretation of Dreams* he was forced to conclude that the wish fulfilled by punishment dreams was an unconscious wish, but one that belongs to the ego. "The mechanism of dream formation," he observes, "would, in general, be greatly clarified if, instead of the opposition between 'Cs' and 'Ucs,' we were to speak of that between the 'ego' and the 'repressed.'" In 1915 he concedes: "The truth is that it is not only the psychically repressed that remains alien to consciousness, but also some of the impulses which dominate our ego—something, therefore, that forms the strongest functional antithesis to the repressed." In 1920, Freud suggested that the nucleus of the ego might be unconscious and considerably more extensive than its preconscious part. Finally, in *The Ego and the Id* (1923), he acknowledged: "We have come upon something in the ego itself which is also unconscious, which behaves exactly like the repressed; that is, which produces powerful effects without itself being conscious and which requires special work before it can be made conscious. From the point of view of analytic practice, the consequence of this piece of observation is that we land in endless confusion and difficulty if we cling to our former way of expressing ourselves and try, for instance, to derive neurosis from a conflict between the conscious and the unconscious. We shall have to substitute for this antithesis another, taken from our understanding of the structural conditions of the mind, namely, the antithesis between the organized ego and what is repressed and dissociated from it. We recognize that the Ucs does not coincide with what is repressed; it is still true that all that is repressed is Ucs, but not that the whole Ucs is repressed. A part of the ego, too—and heaven knows how important a part—may be Ucs, undoubtedly is Ucs." The "organized ego" retained the name ego, while the segment of the Ucs that included the repressed and everything that was dissociated from the ego was called the id.

We see that it was his experience with neuroses that made it necessary for Freud to assume the existence of at least two psychic institutions. Since the struggle between the two institutions is normally entirely unconscious and, in neuroses, mostly unconscious, it must be assumed that there are unconscious forces at work in each.

The Id

The concept of the id is one step further removed from immediate observation than the concept of the Ucs. The latter may be considered to denote simply the collection of all ideas that cannot become conscious or that can become conscious only with difficulty. The other properties of the Ucs are inferred, and some may be found to be incorrect without impugning the concept Ucs. The id, on the other hand, is defined in terms of the instinct theory of Freud, and the concept of the id stands or falls with the latter. The id may be defined as the collection of central nervous system mechanisms concerned with creating, organizing, and energizing instinctual needs. We need not know how such a need is represented physiologically, though plainly there

must be some physiological statement of it. We know of its existence from observing the striving of animals* and men to find the opportunity to perform certain stereotyped acts that consummate the need.

A mechanism that creates instinctual needs must have access to certain kinds of information. Since some instincts are concerned with supplying tissue needs, for example respiration, eating, and excretion, the mechanism must be informed of tissue needs, whether by afferent nerve impulses as, for example, from a distended bladder or bowel or a churning stomach, or by the concentration of blood solutes as in the case of the need for oxygen or water. The sexual instincts do not respond to tissue needs, but in animals, and in humans at the time of puberty, they are influenced by hormones. During human sexual maturity, endocrine influences are minimal (Beach, 1948). The strength of sexual strivings is determined by the recency of gratification (the more recent the gratification the weaker the need), by the urgency of other needs (for example, the need to escape, which takes priority) and by the general physical condition of the body (the normal flow of instinctual function is arrested by illness). I believe that the need for sleep is determined by the state of depletion of the instinctual mechanism itself, for I suspect that the function of sleep is the regeneration of libidinal energy.

In the human at least (and this may also be true among some animals), the physiological statement of the instinctual need is translated into a psychic statement, a wish. The fundamental element of the psychic representation of instincts is the wish. A wish implies a striving, a tendency, and must be supported by the capacity to mobilize motor acts, an impulse. This impulse to act is spoken of as psychic or instinctual energy or, in the case of the sexual instincts, libido. (It is homologous to what Tinbergen calls motivational impulse [1951], but is somewhat different from Lorenz's action-specific energy [1937], for that implies that the impulse is related to a specific act rather than to an instinctual tendency.) The id, therefore, creates instinctual needs, translates them into wishes, and provides the capacity to mobilize motor acts.

Once formulated and provided with impetus, these wish impulses tend toward discharge, that is, toward action; the longer the action is deferred, the stronger does the impulse become. As the impulse becomes stronger, the wish becomes less specific. Gratification of the wish may be deferred because the environment provides no suitable opportunity, because the wish is obsolete and therefore inappropriate, because its gratification would bring the individual into serious danger, because gratification would mean the loss of something or someone dear to the individual, or because gratification is inconsistent with the behavior expected by others or with the individual's own standards. When, for any of these reasons, the wish must remain frustrated, the accumulation of impetus makes it possible for the wish to activate other wishes that resemble the first. Such a substitute wish may differ from the original by having a different object (for example, heterosexual rather than homosexual), a different contact apparatus (for example, the mouth rather than the genitals), a different role or voice (for example, a reflexive wish may replace a passive

* In this paper I use the term "animal" to denote only the lower animal as distinguished from the human.

one), a different technique (for example, working together instead of seduction), or a different tendency (destructive rather than affectionate). The gratification of a substitute wish exhausts its own impetus and decreases the potential of the original wish whose energy it borrowed. It is necessary to refer briefly to this aspect of instinct theory, for it is the function of the id to provide for instinctual gratification, and this plasticity (which far exceeds the plasticity of the instinctual life of animals) is one of its important attributes.

We are aware, therefore, of two forms of organization within the id. The first is the process of establishing needs and translating them into wishes; the second is the parallel array of energized wishes struggling for expression and priority and transferring impetus from one to the other. We find no evidence for any other kind of organization; specifically, we find no indication of logical consistency or of correspondence with any aspect of the external world. Opposite wishes are not mutually incompatible, and one may even transfer its impetus to the other; for example, a wish to be attacked sexually may, because it evokes anxiety and therefore is bound to be frustrated, activate a wish to perform a sexual attack.

Since the id is concerned solely with the formulation of the biological needs of the individual, its function is not influenced by the individual's encounter with the outside world. It does not even register percepts, and any previous experience of pleasure or pain in connection with the gratification of a wish does not influence the rate of regeneration of the wish energy. On the other hand, certain experiences of early childhood (that is, before the age of five) may achieve crucial significance either because they were especially gratifying or especially painful, and these experiences may be preserved in the id as paradigms for subsequent gratification. This tendency to repeat an earlier experience as a vehicle for instinctual gratification is known as the repetition compulsion.

Some of the wish impulses of the id proceed undeterred into the ego and are executed. Others were gratified during childhood, but become obsolete and prohibited, for example, the wish to suck the mother's breast. These are repressed. Still other wishes may have been conscious at some point during childhood but not gratified, for example, the wish to devour the father. These, too, are repressed. These latter two categories comprise the group to which Freud referred as "the repressed." The unrepressed wishes that originate in the id and the repressed wishes which are contained in the id are the only id products to which we have any access. What other unconscious psychic material may be there we cannot know. Certainly the neural structures and processes that underlie the psychic ones are, in a sense, unconscious for they are not themselves psychic material.

To summarize: the id is the central nervous system structure concerned with elaborating instinctual needs, translating them into wishes, providing these wishes with impetus and transferring impetus from wishes which cannot be satisfied to other wishes which can.

The Ego

Definition. Like the id, within the structural hypothesis, the ego is defined in terms of the instinct theory. It may seem arbitrary to divide the instinctual

mechanism into two segments, one concerned with formulating wishes and a second with executing them. The justification for this division, as noted above, is that the second institution often obstructs the wishes developed in the first, and this obstruction is the basis of neurotic conflicts. The wish impulses of the id strive only for gratification, and the id offers no interference. However, it is clear that some agency must be concerned with ascertaining whether circumstances in the environment are propitious, whether a proper object is available, whether gratification of the wish would incur danger or condemnation, whether it would result in the loss of important objects, or whether it would be inconsistent with the behavior standards of the individual. In contrast to the id, which knows only internal necessity, such an agency must be concerned with external opportunity and external restriction. Freud conceived of the ego, in the structural hypothesis, as a structure which, like the id and originally part of it, is concerned with the instincts, but which, at an early age, was differentiated away from the id and modified by its proximity to the external world. One may consider it as a screen interposed between the id and the external world, or perhaps as the surface of the instinctual apparatus. Also, one may emphasize the idea that the ego is the agent of the id, charged with the task of arranging the most appropriate circumstances for gratification, and deferring or preventing gratification when gratification would not serve the individual's best interests.*

Structure. While the ego is a surface organization rather than one of depth, and consequently more accessible to inspection than the id, still its structure is elusive and difficult to fix. In the *Project* (1954) Freud spoke of a permanent portion of the ego (its nucleus) and the changing portion. In *Beyond the Pleasure Principle* (1920) he spoke of a nucleus of the ego that was unconscious and a smaller preconscious portion. In *The Ego and the Id* (1923) he asserted that the true nucleus of the ego was the system Pcpt (perception). The ego also embraces the Pcs, which is adjacent to the memory residues and, in addition, an unconscious portion. In the *Outline of Psychoanalysis* (1940) Freud states that consciousness is associated with perception and therefore occurs at the surface of the ego; it also receives "feelings" from the body. "Conscious processes on the periphery of the ego and everything else in the ego unconscious—such would be the simplest state of affairs that we might picture. And such may in fact be the condition prevailing in animals. But in men there is an added complication owing to which internal processes in the ego may also

* Although Freud considered his redefinition of the ego in terms of instinct theory as an advance, some more recent studies emphasize noninstinctual descriptions and goals of ego function. For example, Hartmann (1939), in his splendid paper "Ego Psychology and the Problem of Adaptation," draws attention to the capacity of the ego to facilitate adaptation in the biological sense. I believe that it is misleading to regard adaptation as a principal biological goal, since adaptation alone is insufficient for species success. The exploitation of the environment for the satisfaction of instinctual requirements seems to me to be a more crucial aim (Ostow, 1957). If this process, rather than mere adaptation, is taken as an ultimate function of the ego, the ego remains, as Freud proposed, an agent that seeks to arrange for instinctual gratification, and not merely that psychic institution that deals with the environment. Consequently, despite the insight that he has brought to bear on a study of the ego, Hartmann's position appears to me to be a retreat from Freud's later conception of the ego.

acquire the quality of consciousness. This complication is produced by the function of speech, which brings the material in the ego into a firm connection with the memory-traces of visual and more particularly of auditory perceptions. Thenceforward the perceptual periphery of the cortex of the ego can be stimulated to a much greater extent from inside as well: internal events such as sequences of ideas and intellectual processes can become conscious; and a special apparatus becomes necessary in order to distinguish between the two possibilities—that is, what is known as reality testing." In other words, in Freud's last description of the structure of the ego he distinguished a segment that was homologous with the ego of the animal from a segment that was peculiar to humans or especially characteristic of them. The former is concerned with perception directly in the service of instinctual gratification and with the regulation and execution of instinctual drives; the latter is concerned with memory traces, speech, sequences of ideas, and intellectual processes. Let us call the first segment the nucleus of the ego, and the second its supplement.

Beginning with Nunberg's conception of the ideal ego (1955), we may attempt to trace the development of the structure of the ego (Freud uses the term "ideal ego" in his paper *On Narcissism*, but it seems to me to be synonymous in that context with ego ideal). The ideal ego is that of early childhood, which offers no obstruction to the wishes of the id. It may be encountered in the normal regression of the dream and in the pathological regression of catatonic states and, probably, of psychomotor automatisms, as well. Every wish that appears in the ideal ego becomes conscious immediately. Freud, taking a cue from dreams, psychosis, and childhood hallucinations in the dark, supposes that in infancy, as wishes become conscious, they are instantaneously gratified by hallucination. Whether or not this supposition will be confirmed, the infant acquires the illusion of omnipotence for, by giving signals to its mother, it obtains prompt gratification of its needs. Since in the first half year of its life the infant probably does not recognize that its mother is separate from itself (Spitz, 1950), it fails to distinguish between gratification provided by her and that provided by his own ego. This ideal ego does nothing except to execute the wishes of the id as promptly as possible. While psychically the infant knows no object other than itself and is consciously aware of no other percepts than its own sensations of comfort or discomfort, nevertheless its ego is alert to meaningful percepts emitted by the mother, especially the appearance, odor, warmth, and texture of its mother's face, hands, and breast, and it emits signals to the mother to which she must respond by offering the needed gratifications. According to this formulation, consciousness attends only the individual's own inner sensations, while the ego executes transactions with its environment in a nonconscious manner; this is true both in infants and in the case of regression of the ego to its ideal state. From what we know of the instinctual life of animals, this mode of instinct gratification seems to operate among them as well. They are presumably under the influence of affective sensations (Lorenz, 1935), but their actions are spontaneous or are automatic responses to certain "releasing" sign stimuli (Lorenz, 1952). Freud realized that his distinction between id and ego must apply to animals (1940)

as well as to humans, since it is merely the distinction between the source of instinctual behavior and its executive agency. I believe that the ideal ego, as conceived by Nunberg, may be homologous with the archaic ego of the animal.

With maturation, two types of change appear in the ego. First, the ideal ego develops to form the nucleus of the mature ego; second, a new supplementary structure is added. The maturation of the ideal ego involves the erection of a set of barriers that exclude certain id wishes from the ego. Some of these wishes must be repressed to make way for more mature forms of behavior, other wishes would lead the individual into danger, still others would result in a serious loss and, finally, some must be repressed out of deference to the wishes of the parents or their superego images. The capacity to erect such barriers and to coordinate them with experience and external necessity is acquired by the nucleus of the ego as it matures. Neither the barriers themselves nor their operation ever reach consciousness directly.

Where does consciousness appear? If our assumptions about the archaic ego of animals and the human ideal ego are correct, consciousness is originally an awareness of sensation of comfort or discomfort, of a succession of affects, positive ones inviting the individual to perform the acts to which they are attached, and negative ones inducing avoidance. Each affect appears in the presence of an instinctually significant percept, but the focus of interest in archaic perception is the affect, not the object perceived. This awareness of affect is actually the precursor of self-observation.

Freud associates consciousness with perception and, certainly in adult life (that is, with a mature ego), perception is the most common condition of consciousness. Even dream consciousness is associated with hallucinatory perception. I believe that perceptual consciousness is a property of the mature ego and involves not only the ego nucleus, but also the supplementary structure to which Freud alluded. This supplement consists of a microcosmic reproduction of the external world, complete not only in the sense that all relevant images are represented, but also in the sense that it includes rules for prediction. The advantage of such a supplement is that when an individual wishes to gratify an instinctual need, it is not necessary for him to range the entire horizon—he may merely scan his repertory of memories and, in them, he will probably find the object he seeks. Having found the image of his object in his memory he can then, using the knowledge he possesses, work out a plan to approach the actual object. Because his memories represent the real world in a dynamic way, he can use them to make predictions. This ego supplement includes, therefore, what had hitherto been known as the Pcs. (The fine distribution of preconscious and unconscious elements in the ego nucleus and supplement is not evident at once and will require discussion elsewhere.) Becoming conscious of a memory image is different from becoming conscious of a percept, yet I believe that the ego supplement plays a part in both. What we generally call perception is actually a process starting with the impact of a percept on sensory organs and ending with consciousness of the percept and an affective response to it. Not all percepts that are recorded (probably in the ego supplement) become conscious. It is a commonplace of analytic experience to find that a percept that had not been consciously noted by a patient (for example,

a detail of the analyst's personal appearance or his office) nevertheless finds its way into the patient's dreams. Apperception includes, beyond the registration of a percept, assigning it a place in the preconscious microcosm and its association with a word. This having been done, the classified percept is now permitted to proceed to the perceptual surface of the ego nucleus where it is presented for scrutiny to the ego representations of active instinctual drives. Should the percept offer a tempting opportunity to an unopposed drive, a positive affect will appear and the individual may act accordingly. If it tempts a repressed drive, a negative affect will appear and the percept will be ignored or avoided as a re-repression is performed. What is important is that in the mature human, percepts do not have direct access to the perceptual surface of the ego nucleus. Occasionally, some especially meaningful configurations circumvent the barrier of the ego supplement and impress the nucleus of the ego directly. On such an occasion the percept will give rise to a stronger affective response than the real meaning of the percept would justify. For example, one evening in a social gathering, I noticed a stranger walking into the room. I immediately experienced a distressing sensation, and only a few moments later did I realize that a prominent mutilation had been the source of the aversion. Evidently two separate acts of apperception had taken place. The quicker of these consisted of the impact of the mutilation on the perceptual surface of the ego nucleus; the slower one consisted of a realistic appraisal of the actual situation, which quieted the distress caused by the first. The quicker component resembles the perception of the archaic ego, which is consciously aware only of its own affective response to a percept. The slower component is based upon an interest in understanding the nature of the external world. In addition to mutilation, dead bodies, blood, and darkness often cause aversion in quite normal individuals because these configurations have strong direct instinctual meaning for the archaic ego. On the positive side, beautiful configurations and sexually exciting ones, by circumventing the ego supplement, evoke feelings of pleasure and attraction. In nonrepresentational art the appeal to the archaic ego is open because the artist makes no effort to conform to the preconscious microcosm.

I believe that the distinction between ego nucleus and ego supplement helps to explain another aspect of ego psychology. The archaic ego, since it is not concerned with understanding the external world, knows the latter only as a collection of interesting stimuli. The concept of a whole object that is a person and not merely a carrier of stimuli becomes possible only by virtue of the conceptualizing function of the ego supplement. The archaic ego of the animal and the ideal ego of the human infant are narcissistic in the sense that they are consciously concerned only with their own sensations. The mature ego, because it possesses the concept of an object, can be concerned with a true object.

Apperception. Keeping in mind the concept of the ego as the agent of the id, charged with the task of finding opportunities for gratification of its needs, yet sensitive to dangers and other hindrances, and keeping in mind also these tentative notions about the structure of the ego, let us examine some of its functions. If it is to execute the program of the id for acting upon and being

acted upon by the real world and its inhabitants, the ego must be able to obtain relevant information from the environment. This information is acquired by perception; the process whereby percepts are brought into relation with instinctual needs is apperception. Apperception can be understood only as a function that serves instinctual gratification.

How are the configurations of the external world known to be instinctually meaningful? Among animals it is assumed that there are "releasing mechanisms" upon which perceived "sign stimuli" act to "release" instinctual drives that have acquired motivational impetus (Tinbergen, 1951). The releasing mechanisms are spoken of as innate, but they can also acquire sensitivities as a result of individual experience (Thorpe, 1956). The human ego is similarly provided with sensitivities to certain configurations by constitutional endowment and with the capacity to acquire others as a result of experience. Among the innate sensitivities are those to configurations of the human body, its parts (see Spitz, 1955, on the eyes-nose-forehead configuration), and its movements. A second group of innate sensitivities is that to certain natural phenomena. Some of these sensitivities are exaggerated in phobias. "Others [of the phobias of early childhood], like the fear of small animals, thunderstorms, etc., might perhaps be accounted for as vestigial traces of the congenital preparedness to meet objective dangers which is so strongly developed in other animals" (Freud, 1926). Acquired sensitivities are determined by the specific circumstances of significant instinctual gratification or frustration. Clinical experience demonstrates that, although sensitivities may be acquired throughout life, those that are acquired after the period of infantile sexuality has been terminated achieve their significance by virtue of their formal similarity to configurations that became significant during that period. For example, the automobile frequently appears in dreams, not necessarily because it played an important role in childhood, but because it is associated with such infantile experiences as being carried, being wheeled in a baby carriage, being enclosed in a small space with other individuals, controlling one's body and the actions of others, and colliding and avoiding collisions with others.

The human ego, then, has a large repertory of configurational sensitivities or images (or their templates). Because these are direct representations of id drives and because they are either innate or associated with innate configurations, the ego collection of instinctually significant triggering or releasing images is probably to be found in the nucleus of the ego, which is derived from the archaic ego. This collection is not directly subject to conscious scrutiny. When an id drive becomes active, we assume that its motivational impetus in some way activates all the ego images directly and indirectly associated with that drive. Hence, as percepts filter through the apperceptive apparatus they are confronted with the activated ego images and, if a match is made, the process of gratification is begun ("perceptual identity," see Freud, 1900). However, the ego nucleus is not exclusively dependent upon current percepts. As we have seen, the ego supplement contains a systematic collection of images representing all that the individual knows about the world. This representation of the environment may be scanned by the apperceptive nucleus for a suitable match. When a match is made, the matching image becomes conscious

as a desideratum, and conscious or preconscious calculations are made, using the information and causal principles of the ego supplement to devise a realistic method of attaining the desired goal ("thought identity").

Reality testing. Since the conscious perceptual surface of the ego nucleus encounters memory images from the ego supplement as well as current percepts, it must have some indication of the origin of the image that it is handling; that is, it must "test the reality" of the image. Clearly, this need to test reality could not have existed before the ego supplement came into being both phylogenetically and ontogenetically. Freud attributes this function of distinguishing to the ego supplement itself (see above). If it is correct that even current percepts of external origin are filtered through the ego supplement, then it is even more likely the latter that is responsible for reality testing. In dreaming, where the ego supplement does not function, although its contents are plucked by the active ego nucleus to serve its needs, reality testing does not operate. Freud was concerned with the need to test reality even in the *Project*, and he attributes it there to the ego. He considers it again in *Formulations Regarding Two Principles of Mental Functioning* (1911), although there he does not clearly distinguish between the reality principle that determines that all action be guided by the requirements of the real world, and reality testing that is concerned only with judging whether a specific image originates currently in the external world or in the collection of memories. In *A Metapsychological Supplement to the Theory of Dreams* (1916) he attributes reality testing to the system Cs and regards it as one of the "major institutions of the ego." In *Group Psychology* (1921) reality testing is assigned as a function to the ego ideal, but in the *Ego and the Id* (1923) Freud considers this assignment an error and there attributes it once more to the ego. Nunberg, nevertheless, asserted in 1932 (1955) that, while the recognition of reality was a function of the perceptual surface of the ego, the judgments of the latter must be sanctioned by the superego, specifically the self-observing agency of the superego. In 1936 Freud cited a personal experience in which, as a result of the protest of the superego, a percept was deprived of the sanction of reality and therefore not fully accepted by the ego.

Affect. The archaic ego of the animal and, presumably, the ideal ego of the human infant as well, experiences affect (Lorenz, 1935). We cannot stop here to elaborate the theory of affects but, briefly, it appears that a pleasurable affect attends the consummation of an instinctual sequence, and the affect is shifted forward so that it appears when a situation in which the final consummating act will be performed has been achieved. It is also shifted further forward to label, by virtue of previous experience, percepts and situations which, if properly exploited, will lead ultimately, via a number of intermediate acts, to instinctual gratification. The pleasurable or positive affect functions as a lure and as a label. Similarly, an unpleasant affect labels a situation that is recognized, on the basis of either innate or learned criteria, as a threatening one. It requires the response of avoidance or escape, and either of these dissipates the unpleasant affect. The specific affect or, more likely, the anxiety that arises if avoidance or escape is frustrated or delayed, is also transferred forward to label situations or percepts that are in themselves innocuous, but

which will lead to danger if one fails to avoid them. Thus negative or unpleasant affects in general, and anxiety in particular, motivate escape or avoidance of danger situations and label situations that are likely to lead to danger. The capacity to elaborate and respond to these affects is a function of the ego—the archaic ego, the ideal ego and, in the adult human, the nucleus of the ego. Since affect does not exist except in consciousness, it must be attributed to the ego. A consciousness of affect is a consequence of every complete apperceptive process, and the affect both indicates the instinctual value of the percept and exerts a motivating pressure.

Whereas for the archaic and ideal egos, the only threats that are recognized are those of external origin, the mature ego of the human, on the other hand, treats certain tendencies that arise internally as threats. In an effort to control them it performs defensive acts that are homologous, in a sense, to flight and avoidance. As in the case of external danger, the defensive act is impelled by an unpleasant affect. Disgust, for example, is evoked by oral wishes that must not be gratified, such as coprophagic or cannibalistic wishes. Although the disgust is a reaction against an internal wish, it is subjectively attributed to the desired object. Horror discourages exploratory interest in new percepts created by mutilation and, in the human, is exploited in an effort to prevent the gratification of wishes to mutilate oneself or others (the mutilation of chief importance in neurosis is castration, which to the child accounts for the anatomical difference between the sexes). Anxiety is an affect that appears when there is strong motivational pressure, but when action is prevented for some reason. The pressure may arise from an overwhelming attraction or from a need to escape. The accumulating motivational pressure creates the discomfort that is called anxiety and that, acting as a signal of emergency, facilitates the defensive action. Thus, the id may emit a wish impulse that, if gratified, would create a danger situation. Presumably the fear that would arise in the presence of the ultimate danger is not as easily transferred forward to the disturbing wish as the anxiety accompanying the need to escape. Hence the threat of activation of a wish impulse that would create a danger situation creates anxiety, which in turn mobilizes forces that defend against that wish. Depression accompanies the loss of a love object and also labels (and thus evokes defense against) a wish impulse that might result in such a loss. The ego is also the seat of guilt feelings, although their source is the superego (see below).

Reality principle. The archaic ego of the animal is little concerned with internal inhibition. Its instincts provide for pursuit of what is necessary and for avoidance of danger. There are few occasions among lower animals when the gratification of an instinct must be arrested because it would lead to danger or group destructiveness. (The most common instance of such inhibition is the need to inhibit predatory killing when the object is a member of the same species, such as a young animal, a female permitting herself to be mounted, or the loser in intraspecific combat.) The ideal ego of the human infant knows no internal inhibition. It strives, in whatever feeble way it can, to achieve whatever gratification the id demands. As the ego matures, it becomes more powerful; it must learn which desires are likely to lead to danger, and it must

comply with the demands of the superego. We have just seen that negative affects are used to enforce this internal inhibition. The tendency of the ideal ego to seek gratification is spoken of as the pleasure principle. The capacity of the mature ego (nucleus) to arrest the striving for gratification out of deference to external necessity is spoken of as the reality principle. Deference to reality also takes another form; the ego supplement provides the mature ego with the faculty of being able to make predictions more complex and more reliable than those offered by associative conditioning. In accordance with such predictions, normal instinctual tendencies will be altered. Thus, one may submit to pain inflicted by a physician or dentist without fighting him off, knowing that to submit is a method of obtaining relief from a more serious and protracted pain. This inhibition of normal instinctual strivings, out of concern with predictable ultimate consequences, is also an instance of the operation of the reality principle. A third instance of the operation of the reality principle is the refusal of the perceptual surface of the ego nucleus to accept as an indication of actual gratification a memory image offered by the ego supplement, since such a memory image does not bring with it the indications of reality that a current percept does (reality testing).

Defenses. What are the mechanisms that the ego can bring to bear upon instinctual tendencies that must be arrested out of deference to the reality principle and the superego? These are known as defenses, for they act to defend the ego against the instinctual demands of the id, which the ego cannot or must not gratify, and hence against a flooding with instinctual energy due to frustration; hence also against anxiety. The ego may be protected against the eruption of these objectionable impulses either by means of a shift of impetus away from them to other and more acceptable impulses in the id, or by means of a reinforcement of the ego's own defenses. Space is lacking here for discussion of the large topic of defenses. The general tendency of the id, when confronted by frustration of a need having to do with an external object, is to deflect its interest to needs having to do with the self. Shifts in the id in the interests of defense of ego barriers are not essentially different from those performed in the interests of circumventing external obstacles to gratification. They include such maneuvers as identification with the object of the instinctual need, projection of responsibility for the need upon the object, displacement of interest from one object to another, or changing the direction of the need, for example, from an active need to a passive or reflexive one. The defenses that the ego can employ against disturbing drives from id (or the superego) are called resistances. They include such maneuvers as repression (that is, excluding from the possibility of conscious contemplation the preconscious images of the object found in the ego supplement and simultaneously mobilizing countercathectic forces against the trigger images by which the instinctual strivings are represented in the ego nucleus); regression (that is, deflecting interest from current to obsolete forms of gratification); reaction formations (that is, deflecting instinctual energy from the forbidden activity to its opposite, for example, from soiling to cleaning); undoing (that is, employing a symbolic or magic technique for canceling the effect of the prohibited wish); and isolation (that is, dissociating the image of the object of the wish or its affect from

consciousness of the wish itself). Defensive maneuvers performed by the ego in its own behalf are often not easily distinguished from shifts of instinctual impulses performed within the id. Moreover, when impulses have been excluded from the ego as a result of its own defensive maneuvers, their impetus within the id continues to grow, and the id is then forced to make adjustments of interest in order to obtain some, if not the optimal, gratification and thus reduce its burden of instinctual energy (compare Nunberg, 1955).

Derivatives. Because the ego is concerned with the execution of the demands of the id and yet defers to the requirements of reality and of the superego, one of its chief functions is the devising of derivatives. The impetus for the performance of instinctual acts is evidently not exhausted by the execution of those instincts that may be gratified; those that must be frustrated continue to press for execution. The ego attempts to find substitutes for these that will have the following two properties: first, they must contain enough of the elements of the original wish so that their performance offers some relief to the pressure for action; second, they must be sufficiently different from the original wish so that they do not elicit the opposition of ego vigilance against danger or of the superego. Such substitute acts are called derivatives. If the aim of an instinctual act is altered so that anatomical contact of erogenous zones is no longer required, we speak of sublimation. For example, a need to inflict pain in a sexual act may be sublimated (purified) by being altered to a wish to help people medically or surgically by bringing about some degree of therapeutic injury or even pain. If the original object of the instinctual wish is no longer conceived as the object of physical desire, so that the love now becomes tender rather than sensual, we speak of idealization. Sublimation and idealization are two of the most common forms of derivative formation, but other alterations of the original frustrated instinctual need are possible.

Intellectual function. The mature ego of the human contains, as we have seen, a supplementary structure that liberates the ego from being restricted to currently presenting environmental opportunities, and from being limited to associative conditioning as a guide for making predictions. This supplement includes a microcosmic reproduction of the external world, including the self; the individual images are counters with which calculations can be made. The making of calculations requires a knowledge of a calculus; that is, a set of rules or principles for predicting consequences. The ego supplement can operate, therefore, only when it is "loaded" with information obtained from the environment; that is to say, with memory images, their interrelationships, and principles for prediction. It manifests a curiosity about these things which, on analysis, can be demonstrated to be derived from the sexual curiosity of the child. Given any current percept, the apperceptive process includes two distinguishable components. The first we have already described: assigning to the percept the connotations pertaining to it, as determined by the ego supplement, and then permitting it to confront the perceptual surface of the ego nucleus, where an attempt will be made to assess its instinctual significance by comparing it with the images of instinctual elements contained in the nucleus. The second apperceptive process consists of using the percept to enlarge the ego supplement, increasing its store of information, and integrating

it with what is already known. This need to integrate current percepts with the entire body of information included in the ego supplement is a manifestation of what is known as the synthetic function of the ego. The need to find causal relations between what has been observed and what is known has been called by Nunberg (1955) the "need for causality." In most activities both aspects of apperception are active; in some, however, one or the other is dominant. For example, in actions that are constantly repeated in the same way, almost no new information is added to the ego supplement. On the other hand, there are activities such as investigation or study that are concerned primarily with loading the ego supplement and almost not at all with instinctual gratification (other than sublimated curiosity).

Configurations and concepts are often difficult to use as counters in mental computations. In the ego supplement this difficulty is decreased by the device of attaching a word to each independent configuration or process. The words can be separated from their referents and handled in calculation with considerably greater facility than the latter. Freud considered the use of verbal logic a hallmark of the preconscious, which is included within the ego supplement.

Action. Provided by apperception with data from the current environment by the ego supplement with data concerning potential sources of gratification, by the system of negative affects and defenses with a catalogue of wishes that must not be gratified and, as we shall see, by the superego with a preferred profile of behavior, the ego is in a position to obtain gratification for the instinctual needs of the id. When an instinctual need has been submitted to all of the modifications, inhibitions, displacements, and attenuations that have been described, the ego is ready to take action. The archaic ego of the animal acts by initiating one of a fixed repertory of procedures with which it is innately provided. Some of these procedures have a definitive function of approaching or acting upon the object, and others have primarily a signaling function. There is no reason to attribute conscious intention or plan to this archaic ego. Psychically, as we have said, it is probably entirely narcissistic; that is, concerned only with its own internal sensations. Its actions are, in a sense, mechanical, without conscious awareness of purpose. The human ideal ego is similarly narcissistic, acting without consciousness of purpose or intent. The infant is capable at first of few definitive acts. Feeding and respiration can be performed at birth; control of muscles and sphincters develops later. Aside from these simple tissue-need operations, the archaic ego performs chiefly signaling operations that act powerfully upon the mother to compel her attendance and service. Such signals include crying, smiling, wincing, writhing, and cooing. When the ego has matured it continues to emit unintentional signals in expressive movements of facial musculature, posture, and vocal ejaculations. The mature ego, however, parallel with the increased knowledge of the external environment that it acquires by incorporating an image of it in its ego supplement, achieves mastery of its own actions. It isolates individual acts from the sequences in which they occur in archaic inherited instinctual patterns, and it breaks them down into fragments (rudimentation; compare Lorenz, 1937). These fragments can then be self-consciously recombined into

novel sequences that will conform to plans made with the assistance of the ego supplement. These intentional planned acts may be definitive efforts to achieve instinctual gratification or they may be limited to speech signals aimed at other individuals whose cooperation is desired. By exercising its capacity to act, the ego finally achieves the requisite instinctual gratification.

Splitting of the ego. The symptoms of neurotic and psychotic illness display a segregation of certain elements of the ego from the rest of the ego organization. For example, the compulsive neurotic will worry about, and strive to prevent, catastrophes that the intact core of his ego knows to be most improbable. Even in the absence of mental illness, not all ideas included within the ego are mutually consistent and compatible. There is a constant tendency of the ego to revert to magical, nonrealistic thinking as in superstition, fantasy, gambling, and prejudice. Freud spoke of such phenomena as the result of a splitting of the ego (1940). Does this kind of split mean that two portions of the ego may contend with each other and thus produce mental illness in the same way that conflict between id and ego may be pathogenic? Since Freud distinguished between id and ego and between ego and superego because he found that such distinctions were required by the observed phenomena of mental illness, he implied that there were no pathogenic conflicts within any one structure. For example, in depersonalization and derealization, an image that has been apperceived is not fully integrated into the ego supplement; the sense of reality that should normally attend it is withheld. This is an instance of a split in the ego, yet the conflict that gives rise to this symptom is a conflict between id and ego that the latter undertakes as a result of the influence of the superego. In other words, the split is intrasystemic, but the conflict is intersystemic.

The Superego

Just as the phenomena of neurotic conflict required the assumption of an ego that could act to oppose the instinctual strivings of the id, so certain phenomena of psychosis require the assumption of an agency which can act to oppose certain tendencies of the ego.

Freud took written cognizance of the problem of a tendency to act against the ego (that is, self-punishment) in *The Interpretation of Dreams* (1900), and in two footnotes appended to these citations in 1930 he mentions that self-punishment is a function of the superego. In 1914, in his paper *On Narcissism*, Freud discusses the erection of an idealized image of the self within the ego. This image is idealized according to the demands of the parents. The advantage of this idealized image is that it offers itself to the ego as an object for love, in competition with the external object. By reserving a portion of instinctual interest for this internal image, the ego prevents complete depletion of its self-love by devotion to an object. Repression of instinctual demands is performed out of a need to comply with the idealized self. A self-observing agency appears in connection with this ego ideal to take note of discrepancies between the actual performance of the ego and the standards of the ideal. In paranoia one encounters this self-observing agency projected

onto others who are accused of spying upon, criticizing, and hurting or punishing the patient. This agency corresponds to conscience, which in turn arises from the critical influence of the parents and, subsequently, others whose influence the individual accepts as authoritative. Dream censorship is also attributed to this agency. The ideal is derived from social groups and, when the ideal is unfulfilled, social anxiety or guilt arises out of fear of punishment and loss of love.

In 1917, in his work on *Mourning and Melancholia* Freud suggested that the delusions of moral inferiority that are a constant feature of melancholia arise from criticism of one part of the ego by another; the criticizing agency is conscience. In *Group Psychology* (1921) he continues his discussion of the ego ideal in terms of the phenomena of melancholia. Melancholia follows the loss of an object; to reduce the pain of the loss, the ego identifies with the object by incorporating the image of the object, or by introjecting it. The hostility of the ego against the lost object is now displaced to the relation between the conscience and the ego that has incorporated the object. The conscience attacks the ego as the ego would like to attack the object. It can do so because it has been split off from the rest of the ego. This critical agency, which is associated with the ego ideal, performs the functions of self-observation, supervision of behavior from the point of view of morality, dream censorship, and instigation of repression. The ego becomes an object to the ego ideal that has developed out of it. When the ego conforms with its ideal, a feeling of triumph emerges and, when it fails to conform, a sense of guilt and inferiority ensues.

The term ego ideal is replaced by superego in *The Ego and the Id* (1923). The Oedipus complex is resolved by partial (that is, nonsexual) identification with the father and, to certain extent, with both parents. This parental identification forms the basis for the ego ideal or superego. In this agency is vested the power of approval or prohibition once possessed by the parents. The ego strives to obtain the love of the superego and fears punishment by castration or loss of love. This fear is expressed as a sense of guilt.

The specific relation of the superego to aggressiveness is described in *Civilization and its Discontents* (1929). Aggressiveness toward others is controlled when it is turned against the ego as a manifestation of the critical authority of the superego. Social anxiety is fear of condemnation, loss of love, or punishment by the social group that represents the parents. When the social authority has been internalized, social anxiety is replaced by guilt. Freud acknowledges that the aggressiveness of the superego, which is wielded by the incorporated image of the parent, cannot possibly be derived from the latter. It is actually nothing more than the resentful hostility of the child against the prohibiting parent, now attributed to the image of that parent and turned against the ego.

In the *New Introductory Lectures on Psychoanalysis* (1933) Freud repeats the previous formulation. The problems of repression indicate that portions of both the ego and superego are unconscious.

The complexity of the subject, the difficulty of integrating the various phe-

nomena, and the perceptiveness of Freud's observations and formulations leave almost no room for further illumination of the subject. I shall, therefore, confine my discussion to a few discrete topics.

Self-observation. Nunberg (1955) emphasizes the role of self-observation in superego function. Primary self-observation is awareness of one's own affective sensations, and it is characteristic of the archaic and of the ideal ego. Secondary self-observation is the reflection of attentive object perception, back upon those contents of the ego and ego ideal that can become conscious. The former is seen in states of energy depletion of the ego, as for example in the premelancholic and following the administration of phenothiazine tranquilizers. The latter is encountered in states of energy plethora in the ego, as for example in the preschizophrenic and following the administration of iproniazid (Marsilid). The function of the superego depends upon a third variety of self-observation. In schizophrenia this self-observation is dissected free and projected out onto the object; in melancholia, the ego absorbs and identifies with the self-observing faculty of the superego. (The subject of self-observation will be developed more fully in another place.)

The indirect object. The second topic that we shall discuss is the concept of an indirect object. The relation to an indirect object can be observed even in the instinctual behavior of animals. A chick may respond to a signal of alarm emitted by its mother by hurrying to the nearest shelter. In that case we may consider the shelter the direct object of the instinct, and the mother the indirect object. Similarly, in the interest of protecting its young, a mother may attack an animal that approaches its nest. The intruder is the direct object of the instinctual act, while the young are indirect objects. The importance of this distinction is not great in animals, because there is probably no consciousness of purpose or of the relation to the indirect object. In the human, on the other hand, where instinctual tendencies are translated into, and controlled by, psychic representations, the indirect object plays a more important role. Freud brought what had been called the self-preservative instincts into the group of libidinal instincts by emphasizing that they were performed for the benefit of the individual himself; they were narcissistic. In such cases as, for example, eating or defense against attack, the food or the attacker is the direct object of the instinctual act, while the self is the indirect object. In analysis we are familiar with the man who seduces women, not because he has erotic interest in them as objects, but to bolster his confidence in his own virility. In such cases, the women are direct objects of his strivings, but he himself is an indirect object.

During the stage of primary infantile narcissism, the only object of consciousness is the internal sensation of comfort or discomfort. Transactions with the mother are performed with little or no awareness of her as an object. She may be the direct object in terms of actual behavior, although the only object subjectively known is the self. With maturation of the ego the mother becomes a true object of psychic desire. Her desirability is based upon the child's awareness of her usefulness for the gratification of his needs; it is an anaclitic relation. Expressions of love for her still have the self as an indirect object. With further maturation she becomes an object desired in her own right.

Still later, the child performs certain activities upon himself or in his behavior toward others for his mother's sake. She becomes the indirect object for whom self-control is achieved, wishes are inhibited, and ungratifying acts are performed. Until the termination of the Oedipus complex, the parents are indirect objects of most of the child's activities. One may say that behavior that they sanction is given a positive sign, that is, a pleasurable affect, and behavior that they prohibit, a negative sign or unpleasurable affect, which the behavior would not deserve in its own right. After its termination (in fact, by virtue of its termination) the behavior profile sanctioned by the parents is enforced in deference not so much to the current, actual parent, but to a now internalized authority that replaces the parent as indirect object. The encouragement of certain groups of acts and the discouragement of others originally fostered by the parents are retained with undiminished force even after the actual parent is no longer present. To return to Freud's formulation, an ideal behavior profile or an idealized dynamic image of the self is created within the ego in deference to the parent and is retained even after the relation to the parent has become attenuated. The superego confers the force of instinct upon the instructions of the parents.

Whereas in animals the parental object of the young seldom plays a significant role after maturity has been attained, in the human, as we have seen, the parents never lose their significance and importance. The internalized image of the parent and his ideals continues to influence behavior throughout life. This quality of human psychic life is probably the result of the operation of the principle of neoteny (Bolk, 1929; Roheim, 1950) in the area of behavior (Lorenz, 1952; Weyl, 1955). This principle asserts that characteristics of the adult human are homologous with similar characteristics of the young of lower animals. In other words, with respect to the problem of instinctual object choice, the human, throughout his life, is subject to the tie with his parents. We have seen how, as indirect object, the internalized image of the parent continues to influence the object choices and behavior of the mature human.

Stabilizing effect. Now this constant, internal, indirect object can exert a kind of stabilizing influence on the ego's relation to external objects. In his earliest descriptions of the ego ideal, Freud (1914, 1921; Nunberg, 1955) noted that by acknowledging the separate and external nature of its objects, the ego of the infant was forced to surrender a part of its self-interest; it was required to direct a portion of its energy to external objects at the expense of concern with itself. However, with the establishment of the ego ideal as an internal but separate agency, some of the instinctual interest that otherwise might be drawn outward could be directed inward at this new quasi-object that simultaneously served as an internal and yet also an external object. It made possible a secondary kind of narcissism or self-love, a substitution of the image of the self for external objects, which is often the first line of defense in the presence of internal or external danger. (Primary narcissism is the exclusive concern with self, that is, with ego feelings, ignoring the existence of objects. It is characteristic of the ideal ego.) The ego ideal of the superego, therefore, makes it possible for the ego to endure a temporary separation from real,

external objects, and also prevents, under normal circumstances, complete depletion of the psyche in favor of an external object.

Reality testing. We are now in a position to return to the difficult problem of reality testing. We have noted above that whereas Freud initially attributed reality testing to the ego ideal, he later attributed it to the ego. Nunberg prefers to combine both of Freud's views. He believes that whereas the ego (the ego supplement—M.O.) provides what Freud calls the indications of reality, the superego must ultimately sanction percepts that possess these indications, otherwise the status of being considered real is withheld from them. Why should Freud have entertained for nine years the notion that the ego ideal supervises the judgment of reality? I believe that the reason lies in the superego's function of regulating the ego's relation to objects by acting as a buffer or an internal quasi-object in the manner just reviewed. When the superego disapproves of an external object or of the aim directed at an object, it interposes itself between ego and object, either offering itself as a replacement for the object (secondary narcissism) or fusing with the primary self-observation faculty of the ego (primary narcissism). In other words, the superego acts as a buffer, not only when a disturbance in object relations requires such activity, but it actively uses its buffering capacity to give effect to its approval or disapproval of any specific object relation. In a late paper, Freud (1936) describes how the superego can prevent the attribution of reality to real percepts, thus creating the phenomenon of derealization. The sense of reality is often detached from external objects (derealization) or the ego supplement's image of the self (depersonalization) when interest must be withdrawn from the real world, as for example at the onset of melancholia or schizophrenia. It is for this reason that Nunberg (1955) asserts that "the recognition of reality and adaptation to it thus are dependent not only on the nature of the perceiving and acting ego, but also on an agency in the ego itself [that is, the superego—M.O.], which takes a certain position regarding the experiences of the ego and has to sanction them to render them fully real."

Self-punishment. The final and most difficult topic that I shall consider is the problem of self-directed aggressiveness. Thinking, as we do, with our egos, which are devoted to protecting themselves against danger of internal or external origin, it is difficult to conceive of a self-directed aggressive tendency. However, Freud was so impressed with the clinical evidence for such tendencies that he was led to postulate a death instinct expressed, for example, in the phenomenon of masochism. The ego, he said, may adopt a masochistic attitude toward the superego. We cannot concern ourselves here with the problem of a death instinct, but the superego is undoubtedly able to attack the ego. As we have seen above, although Freud attributed some degree of autonomy to the superego, he derived its aggressiveness from the original resentment of the child's ego against the prohibiting parent. It is not uncommon in analysis, after a patient realizes that he has been attacking (or wishes to attack) the analyst for no real reason, to see him begin to rebuke himself and to suffer under the rebuke. For example, a patient entered the analytic session one day with the wish to strike the analyst. He recited a dream of the previous night in which he is seated next to an unruly boy who insults a

speaker. The patient in the dream threatens to strike the unruly boy. Clearly, in the dream, the patient speaks for his superego, while the patient's hostility to the analyst is projected onto the unruly boy. Since in the dream it is the patient himself who threatens to do the punishing, we see that the superego has acquired the prohibited hostility and transferred it from the authority, as target, to the patient himself. The unruly boy is interested only in the object, the authority representing the father and the analyst; therefore he represents perceptual consciousness, the consciousness that is concerned with objects. The image of the patient in the dream is concerned only with the unruly boy; the image of the patient represents, therefore, the consciousness of self-observation, the superego.

Freud predicted that "an impoverishment of ego-libido directly due to toxins may . . . be able to produce certain forms of 'melancholia'" (1917). It is my opinion that this is what is actually done by the phenothiazine and reserpine tranquilizing drugs. A patient became depressed as a result of the administration of perphenazine (Trilafon). She found it difficult to awaken in the morning and to perform her daily chores. She felt "dead" and began to talk about old ideas of suicide. One evening, when she was alone in her apartment, she looked at herself in the mirror and saw the expected image of herself. However, it did not have the appearance of a reflection, and the furnishings of the room were not reflected in the mirror. The image fixed her by its stare and conveyed the message that she could go into the kitchen and turn on the gas, and that this was the time to do it. The patient became frightened and fled. This was a brief psychotic regression with hallucination. Presumably the image in the mirror was a projection of the superego. Whence did it derive its tendency to kill the ego? It is interesting that in this drug-induced depression there was no expression of guilt. There was pessimism and despair, but no sense of moral worthlessness. I am inclined to speculate that the discrepancy between the demands of the ego and superego on the one hand and the small amount of energy available within the ego on the other is a source of great pain. Such pain would be noted by the faculty of self-observation. In the presence of a psychotic regression, the reality principle of the ego is abrogated and an archaic instinctual tendency to destroy every source of pain (the death instinct) became directed now against the self. When an object has been lost and the patient ascribes the loss to actual hostility or to conscious or unconscious hostile wishes against the object, depression and guilt both ensue and, I believe, act to arrest the supply of instinctual energy from id to ego. Perhaps the biological purpose of this arrest is to prevent the ego from being flooded by instinctual energy which can no longer be dissipated because the object is absent. At any rate, the dearth of ego energy is felt as painful and is now interpreted as a punishment. Also, as we have seen above, the dearth of ego energy mobilizes self-observation and discourages interest in external objects. When the dearth exceeds a given point, reality testing fails, external objects are given up entirely, and psychotic depression or melancholia follows. Self-destructive tendencies might be derived in such a case from an instinctual, defensive tendency to destroy sources of pain.

Localization

Convinced by his initial attempt in the *Project* that a premature attempt to relate psychic function to brain function led only to fruitless "neurologizing," Freud thereafter deliberately refrained from appealing to concepts of brain structure or function in his papers. We now possess a good deal more information on the physiology of the central nervous system than was available in Freud's time, and I shall try to sketch a summary of possible relations between the psychic structure we have been discussing and the structures of the brain. While it will perhaps ultimately turn out that these preliminary hypotheses are not correct, the discussion may at least demonstrate that the functions of the psychic structures can be described in terms that apply to the study of anatomy and physiology.

If we wish to find the locus of those functions that we attribute to the id, namely, the creation and distribution of impulse to instinctual action, we must concern ourselves only with structures that are prominently developed in all vertebrate forms. The structures we are seeking must also be related to the primitive sources of motor power. Probably the paleostriatum is the most likely site to which we can attribute the motor power for instinctual behavior (Ariëns Kappers *et al.*, 1936). I originally proposed that the striate body was concerned with the techniques of instinctual behavior on grounds no more cogent than these (Ostow, 1955b). However, the advent of the tranquilizing drugs seems to me to support this speculation. No matter how the molecular structure of the tranquilizing drugs is varied, the tranquilizing function cannot be dissociated from the side-effect of disturbance of extrapyramidal function. Moreover, I believe that the tranquilizing function consists essentially of a reduction of the potential of psychic energy; that is, a reduction of the pressure for the prosecution of instinctual drives. Such a reduction probably results from a retardation of the generation of this impetus in the id. Hence I believe that the evidence from the tranquilizing drugs supports the supposition that the globus pallidus, the efferent and most archaic element of the striatum, performs the function of activating instinctual behavior, which is the chief function of the id.

In the course of phylogenetic evolution the development of the paleostriatum is soon followed by the concurrent development of a neostriatum and of the dorsal thalamus, which projects to the neostriatum (Ariëns Kappers *et al.*, 1936). The neostriatum has a generally inhibitory influence upon the globus pallidus (Mettler, 1948). If the latter creates instinctual impetus, the neostriatum must be concerned with arresting instinctual drive. On the psychic level, arrest of instinctual drive must be attributed to the ego. In the archaic ego of animals such instinctual arrest or inhibition is seen when it becomes necessary to avoid predatory destructiveness with respect to weak members of the same species, for example, the young, the receptive female, and the vanquished male. We do not attribute any inhibitory influence to the weak, ideal ego of the human infant but, as we have seen, the delineation of the ego as a separate structure in the adult human was required by the fact of instinctual inhibition observed in neurosis. Although the circumstances in which in-

stinctual inhibition occurs in the human are far more complex than in the animal, it may well be that it is the neostriatum (comprising the putamen and caudate nucleus in the human) that is the effector of this inhibition and therefore an archaic component of the set of structures that performs the functions of the human ego.

Destruction of the premotor regions of the human frontal lobe results in the loss of initiative, interest, continuity of behavior, and creativeness. There is a disregard of the ultimate consequences of any act, a failure to take a serious view of the present or future, and an ignoring of the sensitivities and interests of others. There is some similarity between the behavior of patients who have had lesions produced surgically in the premotor frontal regions, and patients under the influence of tranquilizing drugs. However, the defect in the case of the former seems to be more widespread and devastating than can be accounted for merely by assuming a decrease in motivational impulse such as might follow an impairment of pallidal function. I am inclined to assign to the premotor regions of the frontal lobes the function of creating derivatives of instinctual drives, an important ego function whereby the impetus of instincts that are thwarted is transferred to other activities that are formally related to the first but have similar indirect or preliminary effects (Ostow, 1954).

Lorenz attributes affects to lower animals. Since the phylogenetically earliest input to the telencephalon is olfactory, an affective mechanism must exist in the lowest vertebrates in connection with the olfactory apparatus. The hippocampus (and its *Anlage*, the archicortex) was, early in phylogenetic history, an olfactory structure receiving the fibers of the medial olfactory tract. It subsequently became dissociated from this source of olfactory fibers and became attached to the olfactory structures supplied by the lateral olfactory tract. In the human the hippocampus has no direct sensory input, but receives secondary sensory information from the olfactory and all other modalities of sensation. Moreover, it is a large structure in nonosmatic (birds and cetaceans, for example) and in microsmatic animals. I have speculated therefore that the hippocampus is the locus of the elaboration of affects (Ostow, 1955a). Since, moreover, the affects and affective sensations that appear during the course of temporal lobe seizures are predominantly negative (that is, unpleasant), the hippocampus is probably more concerned with negative than with positive affects. I suspect that the septal region in which the hippocampus originally developed, and which continues to receive the medial olfactory tract, may be concerned with the elaboration of positive or pleasant affects. Hence the nonolfactory rhinencephalic structures are candidates for the assignment of the affective functions of the ego.

The amygdaloid nucleus that lies subjacent to the uncus on the inferomedial surface of the temporal lobe is actually a complex of nuclei: the corticomedial group is a primary receiving center for olfactory impulses, while the basolateral group receives fibers, not directly from the olfactory tracts, but from the primary olfactory receiving stations. The efferent tract from the basolateral amygdaloid complex (stria terminalis), as well as the efferent tract from the hippocampus (fornix), terminate in the septal nuclei, to which we have at-

tributed affective function, and in the hypothalamus. Now the amygdaloid complex, in addition to participating in rhinencephalic affective function, may also be regarded as a portion of the striatum, since it is morphologically a bulbous expansion of the tail of the caudate nucleus and since it develops as a portion of the striatum (the archistriatum). As a part of the striatal complex, it may be expected to play a role in the activation or inhibition of instinctual impulses; if it is functionally a part of the caudate nucleus, it more likely exerts an inhibiting influence. Hence the basolateral amygdaloid complex may provide the link whereby negative affects such as terror, horror, or depression may arrest instinctual activity. The inhibitory effect of negative affects upon instinctual behavior is an ego function.

The failure of the ego to arrest impulses is clearly seen in the experiments of Klüver and Bucy (1939), who removed both temporal lobes of monkeys and observed a loss of normal avoidance, an increase in exploratory behavior, a loss of negative affect, and an increase in the amount and diversity of sexual behavior. It is not possible to single out the individual structure whose loss is responsible for this effect, but it is clear that within the rhinencephalic structures of the temporal lobe there lie the functional substrates of the ego functions of negative affect and affective inhibition of instinctual behavior.

There is evidence from experiments on eidetic imagery (Klüver, 1933; Schilder, 1942), from the clinical experiences of delirium and intoxication with hallucinogenic drugs, from the nature of dream distortion (Freud, 1900), from the effects of afferent isolation (Hebb, 1954; Lilly, 1956) that in archaic sensory experiences, images change in size, intensity, orientation, and distance; they fragment, multiply, and combine, and time appreciation is disturbed. Now for the perceptive purposes of the archaic ego, this spontaneous fluctuation of the perceived image is useful, for it makes the releasing configuration alone important, while fortuitous but instinctually irrelevant parametric properties are eliminated. However, for the apperception of the mature human ego, which is concerned with the true nature of the objects of the external world rather than with their direct emotional impact, the perceived image must be stable, and its configuration must be represented along with its specific parametric properties. I have suggested above that the ego supplement plays a role in this new form of object-directed and representationally faithful apperception. During psychic seizures of the temporal lobe perceptual illusions are common, affecting such parameters as size, intensity, distance, and speed, as well as reality and familiarity. Moreover, during psychic automatisms there is a regression from the modality of apperception of the mature ego to that of the ideal and archaic ego; namely, a concern only with subjective feelings, but no interest in external objects as such. I infer therefore that, as a result of pathological inactivity during automatism and of pathological overactivity or inactivity, the apperceptive function of the ego supplement is eliminated or impaired during sensory seizures. The function of primitive archaic ego awareness continues during automatism, and the function of secondary self-observation continues during psychic seizures. I have no hint about which specific structure of the temporal lobe is to be charged with the mature process of apperception performed by the ego supplement (secondary

process apperception) but, since the rhinencephalon is an archaic structure, it is probably a neocortical component of the temporal lobe that exercises this function. Consistent with this supposition is the fact that language functions that belong to the ego supplement are localizable to cortical areas. The superior temporal gyrus, for example, is concerned with the interpretation of spoken language. It is also relevant that it is only the temporal lobe whose cortex, when stimulated, gives rise to formed hallucinations.

Although the ego supplement's apperceptive function is probably to be attributed to some cortical structures of the temporal lobe, its function of constructing a microcosmic image of the external environment and making calculations with it is probably to be assigned to the parietal lobes. Lesions of the dominant parietal lobe impair speech formulation, calculation, and construction of maps and geometric forms. They also impair right-left orientation. In addition they result in neglect of the contralateral half of the body and of external space (Critchley, 1953).

All of these suggestions about localization are tentative and speculative, and few or none of them may ultimately be tenable. The purpose of presenting them is merely to demonstrate that the functional terms in which the psychic institutions are delineated are directly applicable to the study of the physiology and the anatomy of the brain.

Conclusion

The structural hypothesis of Freud is seen as an attempt to devise a theory of psychic function and structure that will be consistent with the instinct theory and that will comply with clinical data. Freud's initial hypothesis of systems distinguished by different degrees of access to consciousness was unrelated to instinct theory. In the structural hypothesis, on the other hand, id, ego, and superego are defined in terms of their roles in the pursuit of instinctual gratification. The distinction between ego and id was required by the clinical facts of neurotic conflict in which one unconscious agency concerned with ultimate consequences attempts to impede the strivings of another. The distinction between superego and ego was required by the clinical facts of psychosis in which one agency of the ego seems to watch, criticize, and attack the rest of the ego. Because their definitions are functional, it is possible to look for correlates in neuroanatomy and neurophysiology. Much remains to be understood about the ultimate structure of each of the three institutions, its function, and its mode of operation.

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DISCUSSION OF THE PAPER

RUDOLF EKSTEIN (*Reiss-Davis Clinic for Child Guidance, Los Angeles, Calif.*): It is of extreme interest to me that each author, in discussing specific concepts, has used the historical method. Like Paul Bergman[1] we are trying to assimilate and to understand psychoanalytic theory by means of tracing the overcomplex issues and concepts of today back to their germinal beginnings. Most of the authors have noted, explicitly or implicitly, that this historical point of view can help us to dissect overlapping concepts, to return to the original observations and to original theory constructions, and thus enable us to discover the nature of concepts that at times overlap and that are used in relation to different historical stages of the science of psychoanalysis. Also, it has been suggested that new clinical data, which we frequently were able to discover because of certain theoretical constructs used, have induced us to change our original theoretical notions.

The second common feature of these contributions concerns the predominant fact that we still rely primarily on the work of Freud himself; that is, in spite of many creative contributions and additions by others, Freud's contribution seems to be the solid rock, the strong basis, to which we always return when we attempt to bring some order, some clarification, into the confused language of present-day psychoanalytic contributions.

The historical path is taken since we frequently assume that the history of a science should show a logical development, so that we would be permitted to retrace logically our steps, as might be true for a complicated mathematical system that could be understood if we were to begin with the original simple definitions and then try to discover what effect the addition of a new mathematical concept that entailed certain new definitions would have on the total system. The trouble is that we deal with an empirical science which necessitates that we constantly relate empirical discoveries and theoretical inventions.

The paper of Ostow does not really separate clinical and conceptual issues, but attempts to consider them in parallel, although he knows, of course, that what one may discover through a microscope and what is the nature of the microscope are actually two different areas of investigation.

I suggest that in the discussion that follows we attempt to keep these issues separate.

Perhaps I might be able to clarify what I have in mind if I leave our topic for a moment and discuss the problems one would encounter if one were to

establish rules for the simple concepts of every day language. Permit me to introduce a quasi-historical thought experiment that would enable us to reconstruct the rules that govern the word "blue." The historical method of putting down all the rules that give meaning to this word might consist in observing a small child who is learning to speak. The child might look at an object and be told by an adult that this object is "blue." The child learns to use the word and may apply it each time he sees a blue ball. At first he might not be able to understand the notion of color beyond his ability in pointing out blue balls and calling them blue. He might not designate red balls as blue, and so would not misapply the word, although he has only a restricted notion of its meaning. He would not use the word in the way that we do, but would strictly hold to his implied rule, which requires that each ball that is blue be called blue. If we know the implied rules of his use of language we can understand him.

Incidentally, observations of this kind are really not that far removed from the considerations of analysts, since one might consider that a part of our function is to know the rules governing the system of communication used by our patients. This is particularly true for certain categories of patients, such as certain autistic children who use only rudiments of language that can be understood by the therapist if he is able to discover the implied rules of these primitive language systems. The same holds true, only in more complicated fashion, for such complex language systems as those of dreams, schizophrenia, or symbolization.

As the child continues to grow we can distinguish in his language development rules that have been added to the original ones. The child is now able to apply the word blue to any object and then enlarge his concept by adding rules that permit him to have the word blue applied to different shades of that color. Later on he will learn a use of the word blue that includes rules according to which blue can also be used as a signal, such as in a special light system, or as a symbol, such as the blue used in a flag. As he continues to grow, more and more rules are added until he finally can apply the word in terms of the wave length that defines the color, so that the rules of the word blue permit him to use the word within areas of description, of signalling, of symbolization, within a system of theory, or as a simile such as when he says he "feels blue."

The same would hold true if we were to trace systems of explanation as they are learned by the growing child and become more and more complex and are applied in different hierarchies of theoretical systems.

Such a study, which would consider only the rules of given concepts or given theories (that is, their internal logics), could be separated in principle from the empirical events that have given rise to the invention of these rules. As is true for the growing child, scientists, as they develop their specialties, do not always take the time to reformulate their systems and thus frequently are not equipped to make explicit all the rules that govern the use of their concepts and their theories as their science develops. Ernst Kris[2] spoke of "a lack of trained clarifiers, who might properly coordinate the various proposi-

tions with each other or try to eliminate the inequities of language in psychoanalysis."

An example of a return to an earlier use of the concept of ego is offered through Ostow's statement: "While the ego is a surface rather than a depth organization, and so more accessible to inspection than the id, still its structure is elusive and difficult to fix." This use of the word ego stems from the time when the tripartite model was understood primarily in a topographical sense, and I think now of Freud's diagram of the early 1920s,[3] which reminds one of a geographical map and in which the impression is given that if the ego were on the surface, comparable to cultivated land at the edge of the inaccessible jungle and the primeval forest, the latter two would be comparable to the id, and would be inaccessible to exploration. This early differentiation of psychological functions is understood by all of us, although Ostow's use of the phrase "accessible to inspection" hides the questions whether concepts such as ego and id are concepts of a different order of abstraction, whether he speaks of an empirical difficulty in observing or in finding evidence, or whether perhaps he thinks now in descriptive rather than in explanatory terms.

As a matter of fact (this is merely an aside), if one follows present-day trends in psychoanalytic literature one might also be of the opinion that ego psychology presents the much more difficult area, while id psychology is fairly well known. After all, it is historically true that only during later stages of the development of psychoanalysis have we paid attention to those areas that are now called ego psychology, and that we are much more familiar with these areas of investigation that are grouped under the title id psychology.

It is characteristic of human language, that of the scientist as well as that of the child, that it does not have the definite pattern of a clearly defined logical system, so that the plea for unity of language, as was, for example, expressed in physicalism, seems impractical, though understandable. The search for clarity will not be satisfied through a concise set of constructs, a sort of Basic English for psychoanalysis, but will actually need to be a constant attempt to grasp anew the meaning of ever-changing concepts and to redefine them; we would really need a permanent conference on clarification.

One task, if we should find it possible to separate it from others, would consist of the attempt to study the rules of terms and theories and the rules within these rules. This would be done best, it seems to me, in historical sequence, assuming that our experience will usually hold true, and that earlier and simpler uses of constructs are widened as the development of scientific language continues.

Such a study (Rudolf Carnap[4] has called it pragmatics) examines language in its natural habitat and improves communication through an increased sensitivity to the rules that govern its use. Consequently, the wish to use this new sensitivity in order to arrive at more concise, redefined concepts could be called semantics, but the danger of it is that it actually enlarges the use of language rather than really substituting for other and perhaps obsolete uses. Psychoanalysis is not necessarily helped by new language if, for various reasons, this language cannot be adopted by us.

It seems to me that the historical discussion of psychoanalytic concepts includes the task of establishing explicit rules for earlier and later usages, and to define their limits.

If we return to the child of whom we assume, for the sake of our thought experiment, that he develops language in the fashion indicated, we will instantly think, of course, that his development of implicit rules for words such as the word blue is influenced by outside stimuli. The history of the logic of his language cannot be separated from the experiences he has and that influence language formation. However, observations of large numbers of children might confirm the expectation that there is a great similarity between the first ten words acquired by small children, as well as the implicit rules that characterize their use. A study of individual differences will bring to our attention the fact that different external stimuli influence different language formation, if I may neglect for a moment inner capacities in each child. A child who grew up in a community where blue is used as a traffic signal in the same way that we use the color red as a stop signal would be exposed to an experience that would lead him to develop different concepts of blue and in a different order than would be true for another child who grew up in a small frontier village where traffic signals were completely unknown.

This, of course, also holds true for the development of scientific concepts. Thus Ostow proposes in his study, which is primarily concerned, I believe, with empirical issues, that the tripartite model owes its particular development to the fact that the clinical problems of neurosis stood in the foreground of Freud's early theoretical considerations, and that he was forced to introduce the superego concept in contradistinction to the concept of the ego because of the clinical data of psychosis. In this respect it is important to refer to Ostow's citations of Freud's writings in which reality testing is usually seen as a function of the ego. In *Group Psychology*, reality testing is seen as the function of the ego ideal, a concept that Freud later considered erroneous.[5] One might suggest that reality testing as function of the ego ideal would be predominant in a personality in which decisions were made, as it were, primarily on superego grounds; that is, on the basis of the testing of the inner reality of introjected parental images. Psychotic reality testing, as can be seen in the clinical data of schizophrenic thinking, would be the precursor of later, more adequate reality testing, understood as an ego function in a more healthy personality that is not dominated by the archaic superego.

Let us assume for a moment that Freud's original experiences had been with institutionalized psychotic patients rather than with patients in private practice—the kind of experience one might have expected him to have at Burghoelzli, the institute near Zurich, Switzerland. If his clinical data had come primarily from the observation of psychotic personality organization, would he have developed the tripartite model as he did?

A good many of our problems today, as we bring this model up to date—a model that still seems to be the most useful one from a clinical point of view—are related to the fact that we are using old conceptual tools for new clinical data for which they were not designed in the first place, and which therefore require constant reformulation of basic assumptions.

I have suggested earlier that historical considerations of the problems of conceptualization and theory formation can be subdivided into a number of phases. The first of these would be the logical task of tracing the implied rules of our concepts as they develop. Consequently I suggest a second task, namely, the consideration of clinical data as they give rise to concept and theory formation. I believe it is the strength of Ostow's paper that he relates his discussion of the tripartite model primarily to empirical facts. His discussion of the ego supplement and the implied consideration of a hierarchy of ego organization lead us from the originally rather primitive spatial model, as it was outlined in 1923,[3] to a discussion of the different personality functions which, in shorthand fashion, are described under the convenient headings of the three psychic instances. A third task that might be undertaken by the discussants may concern the interrelationship between concept and datum. The introduction of such theoretical constructs could be considered as the introduction of a tool, analogous to an improved microscope, that would then in turn permit us to see new data. These new data would inspire the introduction of new observational tools and of new constructs, and vice versa. However, we might also wonder whether some of the constructs, designed originally for different observations, actually hinder the advance of our science inasmuch as they do not permit us to see correctly. I am reminded of the simile that Bellak used in his introduction to this monograph, in which he suggested that sometimes the appropriate use of a magnifying glass would be much more helpful than the use of the microscope or the telescope. For these reasons I have returned to the problem of the appropriateness of our concepts for the mastery of clinical data and the mastery of techniques.

Another factor has always deeply influenced our theoretical thinking; I refer to the psychotherapeutic technique itself. The many discussions of the appropriateness of psychoanalytic standard technique, as to what constitutes psychoanalysis and what constitutes analytic therapy, are actually also discussions concerning the nature of our observational tools and their usefulness in construction of theories.

Most of our theoretical constructs are derived primarily from psychoanalytic, therapeutic technique.

The next step in our discussion of the tripartite model concerns its usefulness for the mastery of data gained through techniques other than therapeutic methods. I refer primarily to direct observation and to experimentation.

The genesis of the psychic apparatus, as described by the tripartite model, is occasionally considered as a useful theoretical myth, and occasionally is considered as an actual hypothesis that can be verified or disproved.

The direct observation of infants, for example, has led us to redefine many of our assumptions about the genesis of the psychic apparatus and has given rise to doubt concerning the adequacy of these concepts for the understanding of infant psychology. It may well be that direct observation will deeply influence certain concepts of early development, and then may have indirect impact on theory and technique. Analytic concepts that stem from experimental research in the field of perception indicate that we are now ready to

rely on data other than those from the therapeutic setting, and that psychoanalytic theory is now also influenced by laboratory experiments.

It is fascinating to see how the original tripartite model of ego, superego, and id lends itself, as functional concepts become better understood, to crashing the barrier of mere clinical use and to thus develop more general theories of personality behavior.

Ostow stresses the fact that the introduction of the tripartite model was an attempt to devise a theory of "psychic functions and structure which shall be consistent with the instinct theory," while recent developments supplement our theories, which were originally designed to help us understand how the demands of drive organization are satisfied and how the demands of reality are met; that is, how their drive origin leads to a development of neutralization and freedom.

None of the theories and concepts discussed in this monograph can be discussed without reference to a total theory of personality. The structural model has served well, like the basic structure of a building, the compartments of which are interrelated.

Ostow has given us an extensive statement about the development of the concepts of the tripartite model, and he has relied primarily, I believe, on empirical aspects of our problem.

My remarks are aimed toward clarification of the different tasks of our discussion: the problems of pragmatics, of semantics, of the clinical data, of the relation of theory to therapeutic technique, of the problems of direct observation and, finally, of laboratory experimentation. All of these require consideration in detail and, as long as possible, as separate issues if we want to demonstrate clearly how useful the structural model is in each of these areas and what modifications might be required in some of them. I have suggested that such subdivision would permit us to find a bridge between psychoanalytic thinking as it is derived from the clinic to psychoanalytic applications in other fields and to the integration of theoretical thinking that will bring together empirical and theoretical fragments from different fields of psychology and lead to a systematic theory of behavior. The usefulness of the tripartite model indicates to me that psychoanalytic thinking will have an outstanding contribution to make toward such a general theory of behavior.

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Ostow: Ekstein proposes that I should have written a different paper. I agree with him that the kind of paper that he proposes might have been an interesting one, certainly to read and, possibly, even to write. The reasons I

selected the approach that I did are these. First, I know more about clinical application than I do about anything else. Second, it seems to me that since the terms we use were derived from the clinic and since we are concerned with their clarification, we must go back to the original phenomena, the original observations that made the use of the terms necessary. That is what I have tried to do. That such terms should now, in an attempt to form a general theory of psychology, be confronted with ancillary data from the laboratory, from society, from anthropology, and from child observation is necessary, of course. I recognize this as an important aspect of any attempt to understand how far this theory does apply. I certainly encourage any such attempt. However, the terms themselves and the theory itself arose in the clinic. If the terms are to be clarified, the clarification must take place in relation to the original observations.

WOLFENSTEIN: I was much impressed with Ostow's persuasive presentation. However, I had the impression that Ostow is dealing almost entirely with hypothetical entities, and I did not really share Ekstein's impression that his approach was very empirical. "Forces" and "impulses" and "ego ideal" or "ego supplement" are metaphysical entities, not anything directly observed.

Let me take something related and explain what I mean.

Let us take the case of a patient who shows lack of scruples about behavior that we consider immoral. We are likely to say that he has a "defective superego." What does this mean? What have we added to the observation? The one thing that we have added is ambiguity, because "defective superego" may also refer to many other situations, such as an impulse that overcomes a person on occasion.

Also, one frequently has the illusion that the observed phenomena are merely epiphenomena; when one says that the patient has a "defective superego" one is talking about the real thing that underlies the epiphenomena. However, when we speak of a "defective superego," we mean more than just this observation; we mean that, if the patient does not show the usual scruples about certain acts, we should look for other additional manifestations that may be related dynamically to this phenomenon. In other words, this two-word diagnosis does not tell the whole story. For instance, we may find a need for punishment. Although the patient does not show conscious moral feeling, if he behaves in such a way he arranges to be punished. We have often observed this in other cases and we might look for this combination. Also, we might look for episodes in the history of the patient that might be related to his failure to develop the usual moral scruples. We are using a term "defective superego," instead of a mere description of what was observed as a kind of programmatic statement. Here is a piece of advice for ourselves: let us look for these episodes and for possible genetic and dynamic factors. We cannot know what they are until we find them. What we know are our observations and generalizations from past observations; the use of the term "superego" for a given observation serves as an allusion to the fact that other observations may be relevant here.

As far as Ostow's paper is concerned, I am sure that if this monograph were

to be expanded we could spell out the empirical referents of the numerous interesting statements that he has made; this might be a very worthwhile undertaking.

OSTOW: As I understand Wolfenstein's remarks, they are essentially opposite to those of Ekstein. Wolfenstein says that I pretend to be empirical and clinical and to deal only with data, whereas I am actually dealing with abstraction. I think I am dealing with data! The fact is that it is necessary to go one step beyond attaching a word to everything one describes, but once one has attached a word to a concept one can make secondary inferences. This has to do with the whole problem of method, which we have dealt with many times, but Mirsky, in a previous discussion, infers that there is such a thing as hexokinase, although he has never seen it. We do not consider that an extravagant abstraction or extrapolation. In other words, we are able to make certain generalizations and to make certain causal relations.

I have tried to keep the construct that I have used as close to the data as possible. I have tried to deal with concepts no more than one or two steps removed from the actual observation. I do not regard the phenomena as epiphenomena; I regard them as the real data in which you can see the regularities that will help us to predict what subsequent experience will show.

I agree with Wolfenstein that theoretical statements are used to obscure ignorance and to pretend that we understand a situation when we do not. However, it is no argument against anything to show that it has been abused in the past. Moreover, the fact that a theory can be abused is no argument against having theories. What do we accomplish with a theory? Principally, it enables us to be parsimonious. If we can explain a large number of different kinds of observations with a small number of new terms and new concepts, we have accomplished something.

I am reminded of Benjamin Franklin's answer to the question, "What good is a theory?" You remember his answer, "What good is a baby?"

SANFORD: I think that a large part of the problem is its presentation. I think that Ostow's paper should have been very much longer. In that way the difference between Ekstein's and Wolfenstein's positions might have been better resolved. My own impression strongly supports the position taken by Wolfenstein, that is, it appears that quite a few new notions, new concepts, and new distinctions have been introduced—at least they are new to me—although I must confess that I have not read much psychoanalytic literature in recent years.

My impression is that, when one introduces a new distinction or a new concept into a field such as psychoanalysis, it is very difficult to gain acceptance for it. Consider how few really new concepts have ever been introduced into psychoanalytic literature. This, I believe, is what Wolfenstein has in mind. It is all well and good to have this sense of a certain generalization that you would like to make from certain clinical observations, but what one must consider is the fact that numerous other observers might draw quite different inferences from these same data. This leaves unsolved the question of which concept will achieve an integral place in our theory and endure as something useful. Also, it seems to me that in the task of presenting these ideas one

actually requires more space, so as to be able to deal with all of the various logical objections to the idea and possible alternative explanations that should be made if the idea is to be validated. If this is not done the impression is left, at least with the person who approaches it for the first time, that the idea is overwhelmingly conceptual and imaginative, albeit creative and lacking in empirical basis.

PUMPIAN-MINDLIN: In the controversy as to how many steps we are removed from the experiential data, I am reminded of the children's game "baby step, giant step," and I have a feeling that Ostow feels that he has taken some baby steps. Because of the fact that he has used a number of new terms, we have the feeling that some of them, at least for those of us who have encountered them the first time, are really giant steps, and that it is rather difficult to fit them into our previous frames of reference.

OSTOW: I must thank Pumpian-Mindlin for that comment because actually I think that is probably the only difference; if Sanford found it difficult to understand me, then obviously there was some defect in my presentation that requires correction.

I do not believe that I have introduced any really new concepts. I believe that I may have used new terms for old concepts, and I have tried to discuss old ideas in perhaps a somewhat different way, but I do not believe that I have introduced any new abstractions. If I have created that impression, then clearly I must present my idea in piecemeal fashion, step by step, documenting each step, perhaps in a series of papers.

BELLAK: One of the things that struck me is that Ostow did not discuss his concepts very much from the standpoint of models or from that of how they do or do not help us.

To borrow Sanford's earlier remark, "Was this trip necessary?" If so, the burden of proof is to show why it was necessary and what his ideas will do for us that other models cannot do. I should even go so far as to say that, in a way, he has presented a sort of anti-ego psychological ego psychology. He could merely have said that we should consider the ego to be the totality of ego functions, the ego functions being such and such, and then considered what we could say about the conceptions involved. Instead, he has suggested some of his own ideas on the rudiments of ego functions. I am sure that he must have good reasons for doing so, but he did not give them to us. I do not understand what advantages are to be found in his concepts of the primitive ego, of the ego supplement. In fact, throughout his presentation I was rather disturbed about certain anthropomorphic and spatial concepts, such as proximity to the external world.

MIRSKY: I have great regard for Ostow, but I believe that he made a series of dogmatic pronouncements based, not on data, but primarily on extrapolations from ethology, an area for which I have respect. His description of the archaic ego reminded me of the simple reflex arch, a stimulus, and a response, and nothing else. Of course, I am astounded, and my astonishment is only an expression of the degree of excitement induced in me by your pronouncement that tranquilizers affect instinctual energy in one area and in one manner, while iproniazid (Marsilid) activates or increases instinctual and non-

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